

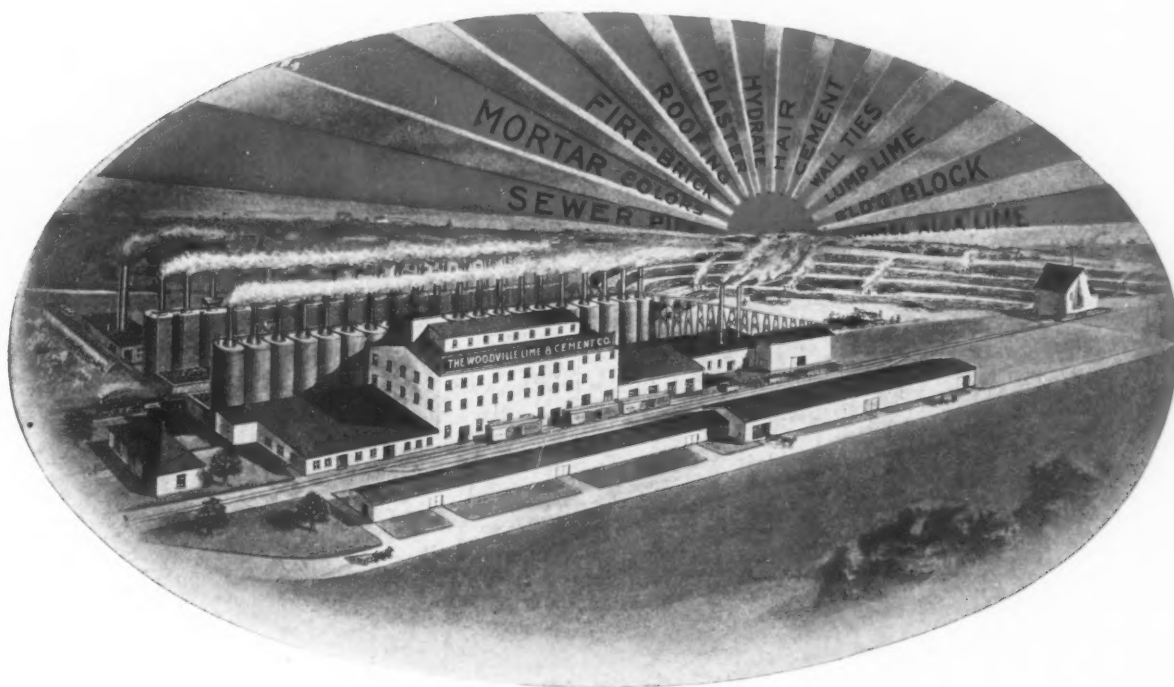
# Rock Products and BUILDING MATERIALS

INCORPORATING DEALERS BUILDING MATERIAL RECORD

Volume XIV.

CHICAGO, ILL., JULY 7, 1914.

Number 5.



## "THE BEST UNDER THE SUN"

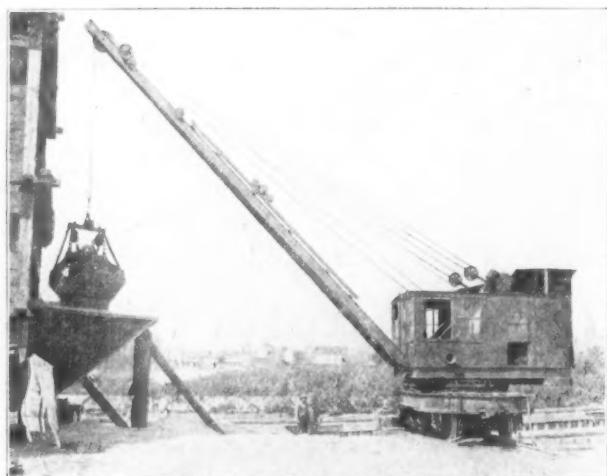
MANUFACTURERS OF

White Enamel Finish Hydrated Lime  
White Lily Finish Hydrated Lime  
Polar Bear "Alca" Stucco  
Enamel "Alca" Plaster  
Lump Lime

WHOLESALEERS OF

Hard Wall Plaster  
Keene's Cement  
Mortar Colors  
Sewer Pipe  
Roofings

**The Woodville Lime & Cement Company**  
1341-50 Nicholas Bldg., Toledo, Ohio



### There is a Quicker and Better Way

of handling Sand, Gravel, Crushed Limestone, and kindred materials. It's more economical too

It's the

#### "McMyler Interstate Way"

The McMyler Interstate Crane shown above is owned and operated by the Artesian Lime & Stone Company. It is fitted with our Multi Power Bucket and the photo shows it handling crushed limestone. We've solved a good many of our customers' problems. Can't we help you with yours?

**The McMyler Interstate Co.**

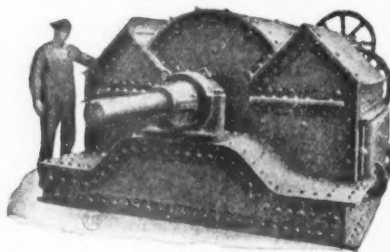
Dept. P-1, Cleveland, Ohio.

London

New York

Chicago

## "PENNSYLVANIA" HAMMER CRUSHERS



For Pulverizing Limestone, Lime, Cement Rock, Marl, Shale, Etc.

Main Frame of steel, "Ball and Socket" Self aligning Bearings; forged Steel Shaft; Steel Wear Liners; Cage adjustable by hand wheel while Crusher is running. No other hammer Crusher has such a big Safety Factor.

**PENNSYLVANIA CRUSHER CO.**

Philadelphia

New York

Pittsburgh



# "HERCULES"

For underground masonry, cisterns, reservoirs, pits, coal and grain pockets.

Watertight, sanitary, hard and dustless floors.

Used with sand and cement to produce a waterproof mortar which will bond perfectly to new or old masonry and permanently waterproof, even if plastered on the inside of a cellar, where the water pressure is outside.

Hercules Colored Coatings; Plaster-bond and Damp-proofing Mastic.

## WATERPROOFING

**HERCULES WATERPROOF CEMENT CO.**

BUFFALO, NEW YORK

## THE WHITACRE FIREPROOFING CO.

Manufacturers and Erectors of

### Hollow Tile Fireproofing

The Largest Independent Manufacturers of Hollow Tile Fireproofing in the United States.

All our Ohio Product is Manufactured from Pure Ohio Fire Clay.

All Size Partitions, Jumbo and Hollow Brick.

Our heavy Dove Tail Hollow Blocks are designed especially for fireproof residences with stucco finish. They are suitable for any part of the building and are adapted to the various architectural designs.

**Without Our Estimate You Have  
No Competition**

General Office: Waynesburg, Ohio

Chicago Office: Sales Department, 538 So. Dearborn St., Chicago, Ill.  
Factories: Waynesburg, Ohio; Malvern, Ohio; Chicago Heights, Ill.



## Service

"Service" is the biggest word in the Building Material Business.

"Wheeling" Wall Plaster quality has been proven long ago. Now we want to prove our "SERVICE."

**Wheeling Wall Plaster Co.**

Wheeling, W. Va.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

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## Medusa Pure White Portland Cement

USED IN THE CONSTRUCTION OF  
MANHATTAN PLACE, LOS ANGELES, CALIFORNIA

FRANK H. TYLER Architect

H. H. BELDEN, Builder

Medusa White Portland is unexcelled for building ornamentation, stucco, concrete building blocks, interior decoration, statuary, cemetery work, parks and grounds, tile, mosaic, setting marble, limestone or brick, etc.

### MEDUSA IS THE FIRST TRUE WHITE PORTLAND CEMENT EVER MANUFACTURED

*Medusa White Portland Cement can be used for exterior as well as interior work, is perfectly white in color and stainless. Guaranteed to be a high testing Portland, passing standard specifications. Medusa has been used by the U. S. Government in over 50 buildings in the past few years, and also in work on the Panama Canal, and shipments have been made to all parts of the globe.*

WRITE FOR ILLUSTRATED AND DESCRIPTIVE BOOKLETS AND SAMPLES

**Sandusky Portland Cement Company**  
SANDUSKY, OHIO



## Mr. Dealer!

### FIREPROOFING

It will pay you to handle our "Minerva" fire clay hollow tile **FIREPROOFING** — it's the best made, and our shipments will please you.

Get our prices on our 4x5x12 and 5x8x12 Backup Block and also on our various sizes of partition tile.

We have a nice stock on hand for immediate shipments.

**The Metropolitan Paving Brick Co.**  
Canton, Ohio

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

**G**OOD portland cement isn't hard to use; mixes easily, sets well and gives everlasting service.

## Marquette Portland Cement

is that kind. For road work, building work, silos, grain repositories, it stands up to its big reputation.

The green guarantee tag on every bag of Marquette Portland Cement means we have made it better than government specifications; as much better as possible.

*Look for the green tag.*

We have an interesting book on "Concrete Roads and Pavements;" it's free; send for it.

**Marquette Cement Mfg. Co.**  
1335 Marquette Building  
Chicago

## NORTH-WESTERN PORTLAND CEMENT



The Reliable Portland Cement

A Portland Cement for the  
NORTHWEST

**North-Western States Portland  
Cement Co.**  
MASON CITY, IOWA

## NOW READY DIRECTORY FOR 1914

Cement, Gypsum and Lime Manufacturers  
NEATLY BOUND VEST POCKET SIZE

**\$1.00 Postpaid**

**FRANCIS PUBLISHING COMPANY**  
537 So. Dearborn St., CHICAGO



It is a fact that the contractors who are using the most "CHICAGO AA" Portland Cement, are the ones who have been using "CHICAGO AA" longest.



## Every Sack Has This Trade Mark

The lion trade mark on every sack of Monarch Hydrated Lime is a guarantee to you that

### Monarch Brand

IS KING OF ALL HYDRATED LIMES

Made from the best stone, its basis is best. Specify Monarch Hydrate—the lime with the lion's head.

Write us today for any further information. It'll pay you to connect with the Lion trade mark.

**THE NATIONAL LIME & STONE CO.**  
CAREY, OHIO

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

PETER MARTIN, Prest. &amp; Gen. Mgr.

LIUS M. MARTIN, Asst. Gen. Mgr.

**Capital \$1,500,000****THE OHIO AND WESTERN LIME CO.**

Manufacturers and Wholesale Dealers in

**Ground Lime, Lump Lime, Fertilizer, Rock Wall Finish, Hydrated Lime, Cement, Plaster, Hair, Etc.****CAPACITY 8000 BARRELS PER DAY**

We have large stone crushers at various places. We make a Magnesia and high Carbonate of Lime. All of these limes are the very best on the market.

**THE LARGEST IN THE WORLD**

**WORKS AT** Huntington, Ind.; Fostoria, O.; Gibsonburg, O.; Sugar Ridge, O.; Tiffin, O.; Genoa, O.; Limestone, O.; Lime City, O.; Portage, O.; Marion, O.; Bedford, Ind.

**OFFICES AT**

Huntington, Ind.

Marion, Ohio.

**BANNER HYDRATE LIME**

Stands for the Four Important Essentials:

Best for Mason's Mortar

Best for Lubricating Plaster Mixtures

Best for Finest White Finishing Coats

Best for Cool Working Chemical Reactions

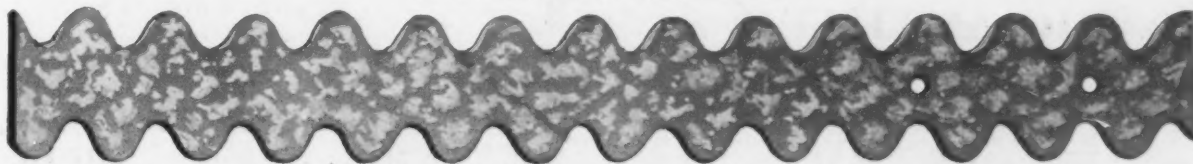
**NATIONAL MORTAR AND SUPPLY CO.**

A. H. LAUMAN, President

PITTSBURGH, PA.

**The Dealer Who Sells Whalebone Wall Ties**

is assured of satisfied customers and repeat orders. There is a big profit for the dealer who sells our goods.

Standard Size, 7 inches long x  $\frac{7}{8}$  inches wide

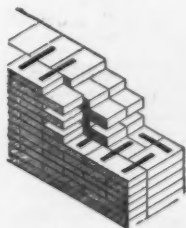
Whalebone Wall Ties

Used for solid brick or veneered walls. Packed 1000 in a box. We want dealers to sell our wall ties and nailing plugs. Write us for our special proposition.

We shall be pleased to mail you samples.

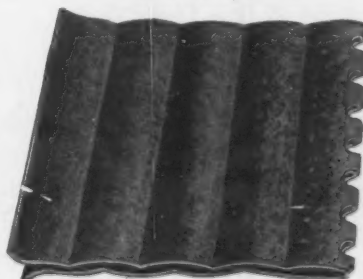
2 $\frac{1}{2}$  inches long x 2 $\frac{1}{2}$  inches wide

Drop us a line, let us know you are interested.

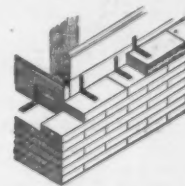


Tie for Solid Wall

We protect the dealer. Write us for our price to you.



Nailing Plug



Tie for Veneered Wall

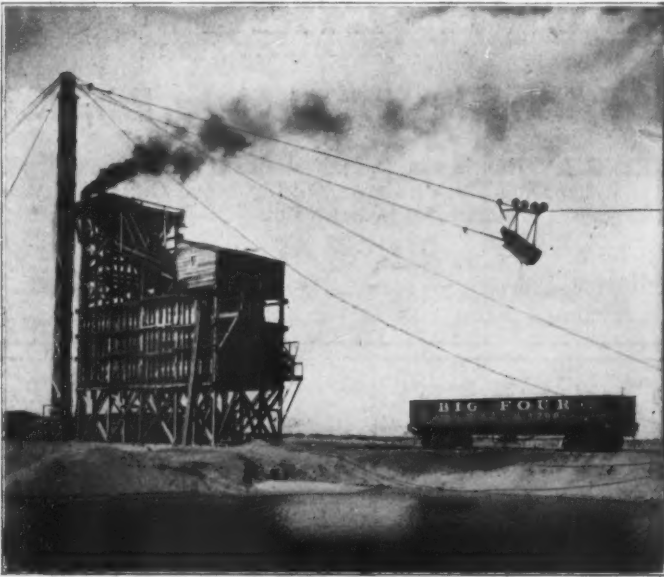
We create the demand by Advertising in Contractors and other publications.

**ALLEGHENY STEEL BAND CO.,****Pittsburg, N. S., Pa.**

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



## Another Drag Line Gravel Washing Plant



THE above plant equipment was furnished complete for the Kampreska Materials Co., Watertown, S. D. It is making good in the same way as our other plants throughout the country. Why don't you get us to furnish your equipment and design your plant?

**The Raymond W. Dull Company**  
1910-12 Conway Building, Chicago

W. E. Austin Machy Co., Atlanta, Ga., Southern Sales Managers.

## STOP! LOOK! LISTEN!

JUST THE MIXER YOU'VE BEEN WISHING FOR

### The BIG-AN-LITTLE



1914 MODEL

Just a Little Bit Better Than The One You Thought Was Best

The small mixer has proved its worth. Contractors see that it pays better to have one or more small portable Mixers, than to mix by hand or to have a great big clumsy Mixer. The question has been to get a Dependable Small Mixer at a Low Price.

The Big-an-Little is the biggest and best small Mixer on Earth and our Low Prices amaze the Mixer world.

Your neighbor has one. They are used everywhere. Ask him. Write us NOW for full particulars.

**JAEGER MACHINE CO.,** 219 W. RICH STREET  
COLUMBUS, OHIO

A-1 Catalog

## Beautiful Houses from Illinois to Massachusetts are Roofed with Reynolds Flexible Asphalt Shingles



A multitude of pretentious residences in a score of states are giving ample proof of the long-lasting surface of Reynolds Flexible Asphalt Shingles.

Every type of modern home can be protected and beautified, at lower cost, with these time-

tried, weather-tested shingles. They withstand the ravages of driving rain, pelting hail, hottest sun and heaviest snow without warping, cracking, splitting, curling or blowing off. Sparks cannot set them on fire. Long Exposure cannot dull their rich color. Adaptable to every style of pitched roof, and make possible unusual architectural effects, such as roll edges, thatch effects and rounded corners.

## Reynolds Asphalt Shingles

Guaranteed for 10 years—will wear many years longer—  
Write for liberal agency proposition.

Rough-surfaced weather defiers made of crushed slate or granite securely embedded in pure Asphalt. Natural colors of garnet, red or gray-green which never fade and never need painting. We are the original makers of flexible asphalt slate shingles and tested them for ten years before putting them on the market. They are uniform in size—8 ins. by 12½ ins.—and are laid 4 ins. to the weather. Easily and quickly laid.

Let us send you a booklet showing photographs of modern houses roofed with Reynolds Asphalt Shingles. Write for a copy TODAY

**H. M. REYNOLDS ASPHALT SHINGLE CO.**  
Original Manufacturer Grand Rapids, Mich.  
Established 1868 Members of National Builders' Supply Association

## Best Bros. Keene's Cement

The Plaster That Stands  
Hard Knocks



The permanent plaster for interior walls.

May be rettempered as often as necessary.

Makes a perfect bond on concrete, brick, tile or lath.



**The Best Bros.  
Keene's Cement Co.**

Established 1889

Dept. A, Medicine Lodge, Kansas  
NEW YORK CHICAGO

## "It Counts 'em and Bundles 'em"

Securely ties cement or plaster bags with 3 wires. Counts and rings bell when correct number of bags are in.

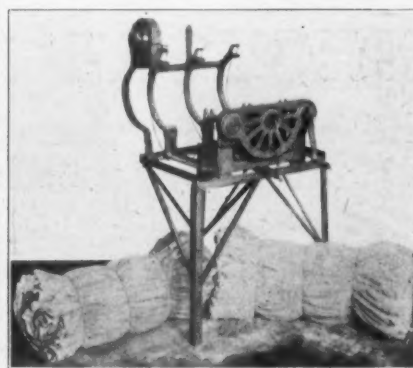
**Saves Time**

**Eliminates Error**

Price \$30.00, f. o. b. Cleveland, O. It pays for itself in a short time.

**Order Now**

**The Faeberrill  
Manufacturing Co.**  
1392 East 40th St., CLEVELAND, O.



Agents wanted in every city. A side line for machinery and builders supply salesman.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



**Comparative Cost per Ton**

or

**Increased Tonnage at the Same Cost**

**ISN'T** it more economical to shoot out the *whole face* in one blast rather than take the rock out in benches? It saves a big share of the cost of powder per ton of rock—it eliminates several settings of track and movement of machines—it minimizes the delay of your crew and shovel—it reduces the possibility of accidents.

And isn't it more economical to drill the

necessary good sized deep holes for face shooting with a drill that releases a quick, heavy, smashing blow at every contact, and at a speed that cannot be obtained by the use of well drills?

It is the efficiency and design of the Special Armstrong Blast Hole Drill that make possible the wide difference in results in comparison with any other method.

**Armstrong**  
BLAST HOLE DRILLS  
BUILT FOR SERVICE SINCE 1867

**Proof from an Armstrong Owner**

*Armstrong Mfg. Co., Waterloo, Iowa.*

We are glad to advise that the drilling machine recently purchased from your company, according to proposal submitted under date of February 20th, wherein you guarantee to drill a minimum footage of 65 feet per day, has fulfilled the requirements, and we are glad to fulfill our part of the proposal.

A. & C. STONE COMPANY  
By JOHN MURNANE.

Mr. Murnane made a test with the Armstrong Blast Hole Drill with the following result:

Drilling time—10 days.  
Footage drilled—722½ feet.  
Number of moves—40 (11 hr. 59 min. moving time).  
Delays caused by rain and moving, changing bit, batteries, etc.—19 hr. 22 min.  
Delay caused by rain alone—6 hr. 7 min.  
Delay in two 200 yd. moves turning machine around—4 hr. 40 min.  
Footage drilled per day—72¼ ft.  
Footage drilled per hour—9.1 ft. net (7.2 counting delays).

**We guarantee the Armstrong Special Blast Hole Drill to drill MORE hole at less cost in a given time than any cable drill on the market, and we will write this in every sale contract we make.**

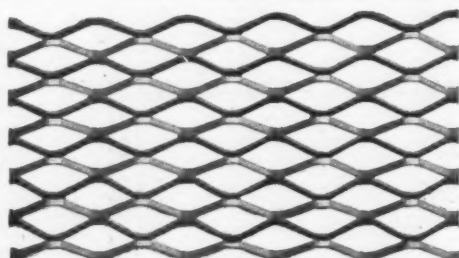
Write for Catalog  
**ARMSTRONG MFG. CO.**  
*Established 1867*  
**Waterloo, Iowa, U. S. A.**

Eastern and Export Office  
17 Battery Place  
New York City

Western Branch  
3rd and San Pedro Streets  
Los Angeles, Cal.

Canadian Branch: Drinkie Block No. 2, Saskatoon, Sask.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

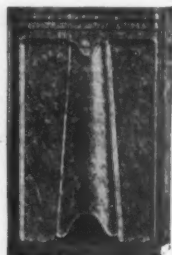


SYKES EXPANDED CUP LATH  
SELF-FURRING

HAS NO EQUAL FOR

### STUCCO WORK

Furnished with either an anti-rust (oil) coating, painted black or galvanized, packed in bundles containing 20 square yards, size of sheets 18x96 in.; in gauges 27, 26, 25 and 24.



### SYKES "IMPERIAL" SHINGLE.

SIZE 10 x 14 and  
14 x 20 INCHES.

We also manufacture all styles of roofing and siding, such as corrugated, v crimp, pressed standing seam, roll roofing, brick siding, weather board siding, beaded ceiling, etc.

## Sykes Metal Lath

Present opportunities for the dealers to double their sales in this line, as Architects are specifying and building contractors are using SYKES products.

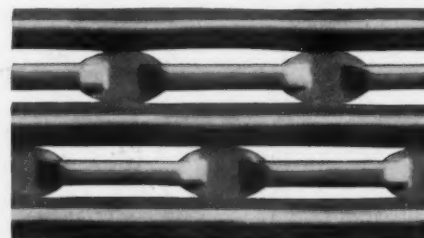
### BASIC REASONS

SYKES EXPANDED CUP LATH is self-furring. This greatly reduces the cost of construction on every building where it is used. It is more economical in the amount of plaster required than any other expanded lath. Quickly erected as both sides are alike, cannot be applied wrong.

SYKES TROUGH SHEET LATH is incomparable in its utility for inside plaster work. Can be used to great advantage on any kind of a building. Unusual design, strength and keying principle.

### WHY NOT HANDLE OUR PRODUCTS AND INCREASE YOUR PROFITS.

Write us at once for our SPECIAL EXCLUSIVE SALES PROPOSITION, SAMPLES, ETC.

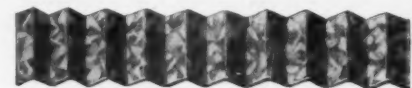


Sykes Trough Sheet Lath

The Strongest and  
Most Durable Lath Made

### Perfect for Interior Work

Furnished with either an Anti-Rust (oil) coating, painted black or galvanized. Size of sheets, 13½, 15½, 18½, 23½ in. wide by 96 in. long.



SYKES WALL TIE

Standard Tie 7 in. long  
Veneer Tie 6 in. long

We also make Metal Corner Bead

**THE SYKES METAL LATH & ROOFING CO.,**  
508 Walnut Street, NILES, OHIO

# THE BELDEN BRICK CO.

Incorporated 1893

Sales Offices:

CANTON, OHIO



## FOUR MODERN FACTORIES

producing practically every color and texture of Face Brick put us in position to take care of the dealer to the best possible advantage. It will pay you to have our samples and prices. Write now.

### FACTORIES:

Canton, O.

Somerset, O.

Uhrichsville, O.

Tuscarawas, O.

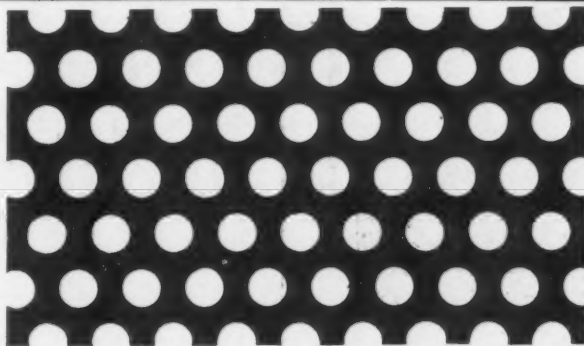
Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

**PERFORATED METALS**

Our Perforated Products have a reputation for accuracy and general high quality, shipments are prompt, and prices the lowest.

Our plant is equipped with modern perforating machinery, and we specialize in this product, elevators and conveyors, and SIMPLEX RIVETLESS CONVEYOR CHAINS.

WE SOLICIT YOUR INQUIRIES



**CROSS ENGINEERING CO.**  
CARBONDALE, PA.

**SCREENS**

**For Every Purpose**

Revolving Screens

Conical Screens

Shaking Screens

FOR:

Stone, Gravel, Sand, Cement, Lime, Coal, Coke, Steel Floors and Gratings, Grilles and Ventilators, Fire Escape Platforms, Etc.

SEND FOR ILLUSTRATED CATALOG

**BRICK—The Old Way of Handling Them is a Nuisance**

In tossing brick out of a car many are broken. A wheelbarrow doesn't carry enough bricks to warrant the time it takes to load, wheel it out and dump it.

**Use a CLEVELAND BRICK CLAMP**

*It is the Newest and Quickest Way*

Furthermore, in unloading brick it actually saves ONE-THIRD of the time over the old methods. This clamp is adjustable and will carry from FOUR to TWELVE bricks. There's no fuss or bother. Simply place the clamp down on the bricks and lift the handle.

The price? It is so inexpensive ANYONE can afford it. Just send your name on a postal and we'll send a neat catalog and price list.

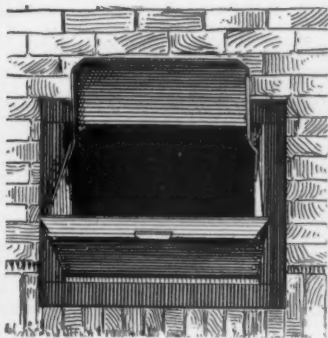
**THE P. D. CRANE COMPANY, 10201 Harvard Avenue, Cleveland, Ohio**

**You Can Make Bigger Profits  
Handling**

**Kewanee All Steel Coal Chutes**

Every building in your town needs a Kewanee All-Steel Coal Chute, and someone is going to make a corking good profit handling them.

The Kewanee Chute is the only indestructible coal chute on the market. It is constructed entirely of boiler steel—it can't break or get out of order. It sells to the building trade on sight.



Kewanee Chute—Open

Furthermore, Kewanee Service will help you sell these chutes. Write for our agency proposition today.

**Kewanee Manufacturing Co.**  
Kewanee, Illinois

WHY BUY MOSSBACK TIE  
WHEN YOU CAN BUY "BOSTWICK" Y

**BOSTWICK  
THREE-STRESS**

SAME NUMBER  
OF  
BRICKS TIED BY  
HALF THE QUANTITY  
OF TIES IF YOU USE  
"BOSTWICK" Y's

Stress or strain led 3 ways!  
"Bostwick Y's" catch hold  
coming or going!

"BOSTWICK" Y's  
are  
Heavy, galvanized, with deep  
corrugations at various angles

EVERY BRICK  
TIED WITH USUAL  
NUMBER OF TIES  
IF "BOSTWICK"  
Y IS USED!

Change of position in wet  
mortar will not reduce the  
holding power!

**SIZES**

Regular walls 7' long, 1' wide,  
2 1/2" spread Veneer walls 6' long,  
1' wide 2 1/4" spread For binding  
concrete walls 10' long 1' wide,  
2 1/2" spread. Regular ties packed  
1000 to box. Weight, 65 lbs.

**THE BOSTWICK STEEL LATH CO.**  
NILES, OHIO





LOS ANGELES RESIDENCE.  
TIGER BRAND USED FOR WHITE COAT PLASTERING.

## Western Dealers Sell Ohio Lime

The Union Lime Company, of Los Angeles, sell tons of it for use on the best building jobs in that territory.

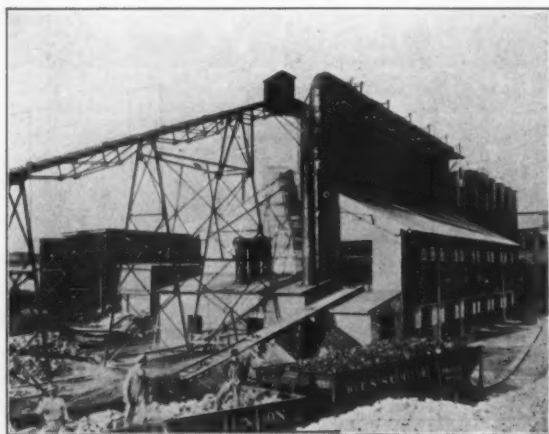
## "TIGER BRAND" Hydrated Lime

is known and used everywhere for white coat plastering.

Dealers find that it always sells well and always gives satisfaction.



**KELLEY ISLAND LIME & TRANSPORT CO.,**  
Cleveland, O.



Doherty-Eldred Lime Kilns

## The Improved Equipment Co.

Executive and Sales Office: 60 Wall St., New York City

### COMBUSTION ENGINEERS

Complete Lime Burning Plants

Lime Kilns

Complete Coal Gas Plants

Gas Producers

Special Industrial Furnaces

Refractory Materials

## Concrete's the Thing Lehigh's the Cement



Quality  
Quick Delivery  
Co-operation

## Lehigh Portland Cement Co.

12 Mills  
Over 12,000,000 Bbl. Capacity

Main Office:  
Allentown, Pa.

Western Office:  
Chicago, Ill.

## DEXTER Portland Cement

THE NEW STANDARD

Sole Agents SAMUEL H. FRENCH & CO. Philadelphia



## SERVICE AND SALES BUREAU

First Aid to the

## ADVERTISERS and SUBSCRIBERS

Let Us Tell You More About It



LARGEST TILE KILN  
IN AMERICA

IT WILL PAY YOU TO HANDLE THE MODERN FIRE-PROOF  
BUILDING MATERIAL

We manufacture all sizes and shapes from the highest grade shale by the most modern process, including backing up, partition, floor arches and hollow brick; also DRAIN TILE.

## AMERICAN CLAY CO.

25 So. Seventh St., TERRE HAUTE, IND.

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



# Rock Products and BUILDING MATERIALS

INCORPORATING DEALERS BUILDING MATERIAL RECORD

Volume XIV.

CHICAGO, JULY 22, 1914.

Number 5

PUBLISHED SEMI-MONTHLY.

DEVOTED TO

Quarry Products, Cement, Lime, Plaster, Sand and Gravel, Clay Products and Building Specialties—Fireproof Building and Road Construction.

THE FRANCIS PUBLISHING COMPANY.

EDGAR H. DEFEBAGH, Prest.

Seventh Floor, Ellsworth Bldg., 537 So. Dearborn St., Chicago, Ill., U. S. A.

Telephone: Harrison 8086, 8087 and 8088.

EDITORS:

EDGAR H. DEFEBAGH, FRED K. IRVINE.

GEORGE A. OLSEN, Editor Retailers' Section, F. G. PULLEY, Associate Editor.

H. F. AKE, Secretary.

DRUSUS H. NICHOLS, Advertising Manager.

Communications on subjects of interest to any branch of the industry are solicited and will be paid for if available.

Every reader is invited to make the office of Rock Products and Building Materials his headquarters while in Chicago.

Editorial and advertising copy should reach this office at least five days preceding publication date.

TERMS OF ANNUAL SUBSCRIPTION.

In the United States and Possessions, \$1.00

In all other Countries in the Postal Union, \$1.50

Subscriptions are payable in advance, and in default of written orders to the contrary, are continued at our option

Advertising rates furnished on application.

Published on the 7th and 22nd of each month.

Entered as second-class matter July 2nd, 1907, at the Postoffice at Chicago, Illinois, under act of March 3rd, 1879.

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Every customer that enters your establishment should leave fully satisfied. As owner, it is your duty to insist that they are treated so that they will be pleased to return at the first opportunity.

The specialty department of the dealers in building materials has grown to be in many cases the most important end of the operation. Some dealers have built up an enormous trade in roofing material, which is supplied in rolls, and the iron specialties, consisting of light columns, coal chutes and clean-out doors, which border upon the territory of the hardware dealer but are still integral parts of the building proposition, have been coming to the dealer more and more. It is up to the dealers who want to keep abreast of the times to find out what specialties their trade will take and provide an attractive stock so as to make this trade grow. It is the natural expansion of the business that the progressive dealer can look for and on which he can be reasonably certain of getting a good return. It is always our endeavor to have the advertising pages of our paper carry a full line of the specialties which have made good elsewhere and which will probably make good with you, so if you read your paper through from cover to cover it is more than likely that you will get some suggestions along this line that will make you good money.

The President told the Virginia newspaper men at Washington last week that the country would experience a big business boom after the anti-trust legislation is out of the way, and congress has acted in accordance with the wishes of the Executive. Whether this is psychological on the part of the President or whether condi-

tions in the country are ripe for a trade revival is yet to be seen. At any rate, it is believed by many producers that stocks of raw materials, as well as finished products, are extremely low at the present and any indication of a return of business confidence should cause a sharp general demand with better prices to replenish the existing low supply of stocks of the average product. So, it would seem that material manufacturers may yet see this year a very good demand for all products; and it is well, in view of this possible trade improvement, to go slow in the matter of making reductions in prices to bring in a few more orders temporarily at the expense of a competitor, which is often the case. Securing business under such practice usually results in an unhealthy condition of the market, which fails to respond to a cure sometimes when the conditions of demand improve. An incurable market is the deep regret of the manufacturer, who is entitled to all the benefits of the periods of good demand, and it should be the active and earnest effort especially of every lime manufacturer to prevent the spread of the contagious disease of needless price cutting which is bound to result eventually in a death to the healthy profit formerly enjoyed.

## Country Settling Down to Business.

The pessimism which prevailed during the early spring months is rapidly disappearing and as a result builders, contractors and building material manufacturers and retailers are looking forward to a splendid summer and fall business. This radical change to optimism on the part of the builders of the nation is due to a number of causes, all of which help to strengthen and increase our natural and artificial resources.

The acts of Congress, it is true, are perplexing business men of the country; they are not satisfied with the administration's policies, especially its proposed anti-trust legislation. But in spite of the fact that business is receiving unwarranted attacks, the men who provide the country with supplies and the working element with labor are "watchful" waiting for the silver lining of the present overhanging cloud with an optimistic attitude.

Reliable reports state that the nation will produce bounteous crops this fall and as a result there will be a demand for labor in the Western and Northwestern States. The sale of the crops will bring money to farmers who have not been making the improvements in recent years, due to the fact that they, like the business men, have been worrying over the financial situation of the country. Retrenchment seems to have been the word of the day and it is gratifying to realize that the optimistic attitude of the country at large is quickly disposing of the retrenchment policy.

Splendid crops and an improvement in business conditions will produce more work and money for the laborers as well as the business man. As a result, more homes and business institutions will be built. There will be a greater demand for builders' supplies and consequently a profit for manufacturers and retailers of these materials. Reports from practically every business center of the country are to the effect that conditions are improving. Building permits of this year correspond favorably with those of 1913, and the months of May and June show an increase over the same months of 1913. We are a nation of optimists; pessimism never will be able to survive very long in our midst.

# WITH YOU and ME

Tom Herbert, of T. L. Herbert & Sons, builders' supply dealers of Nashville, Tenn., has just returned to his home from New York City. He reports this summer's business as normal.

The Jackson (Tenn.) Builders' Exchange has been organized with the following officers: John Cockrill, president; W. C. Hickman, first vice-president; J. M. Tatum, second vice president; Ed Harrison, secretary; S. M. Lawrence, treasurer.

Charles J. McCarty & Co., 65 Oliver street, Boston, Mass., have been appointed eastern New England agents for the Standard low-charging concrete mixers and contractor's tools manufactured by the Standard Scale & Supply Co., of New York.

R. H. Fenn, M. E., of the Kent Mill Co., 170 Broadway, New York, N. Y., favored us with a call on July 6. Mr. Fenn advised that his concern is enjoying a satisfactory total of business, having placed a number of Kent mills in cement plants.

The General Kompolite Co., formerly located at Tenth avenue and North Eighth street, Brooklyn, has moved to the corner of Borden avenue and Heyward street, Long Island City, where it will begin operations at once in the manufacture of cement compositions, employing about 25 men.

As we go to press we are in receipt of an announcement of the removal of the Seattle (Wash.) office of Taylor-Wharton Iron & Steel Co., High Bridge, N. J.; Wm. Wharton, Jr., & Co., Inc., Philadelphia, Pa., and Tioga Steel & Iron Co., Philadelphia, to 1604 L. C. Smith building, Seattle, Wash.

John Ringle, president of the Wisconsin Clay Manufacturers' Association, and head of the Ringle Brick Co., of Wausau, has come into the limelight of late as the result of his activity as mayor of Wausau, Wis. Mr. Ringle has been an able and progressive executive and his work has attracted much favorable attention.

Don L. Towne, chemist at the plant of the Western States Cement Co., at Independence, Kan., decided recently that bachelor life was a colorless mode of living. Mr. Towne accordingly was married to Miss Gladys E. Clark late in June. The couple will be at home at Independence after July 10.

Hon. Alton B. Parker, of New York, former Democratic candidate for president, in company with J. J. Williams and others paid a visit on June 25 to the quarry of the Birdsboro Stone Co., at Monocacy, Pa. Judge Parker is interested in the Mohawk & Hudson Stone Co., a corporation organized to take over a number of large corporations operating stone crushers.

The experimental tests started recently on the White Horse pike, at Camden, N. J., with the object of finding which of the two road materials, concrete and macadam, is the most suitable for road work, is well under way. It is the intention of the bureau of highways of New Jersey to build the pike with both materials, half of each, and to build roads throughout the state with the most successful material.

George M. Thomson, manager of the Canada Pebble Co., Ltd., producers of the famous "Stork" brand pebbles, main office at Port Arthur, Ont., Canada, met with a painful accident a few weeks ago in having a loaded truck fall upon his leg. Owing to the splendid physical condition of Mr. Thomson he will be able to pull through and is now rapidly recovering, although still confined to his room. Mr. Thomson is very fond of outdoor activities and we heartily sympathize with him in his confinement.

The offices of the Association of American Portland Cement Manufacturers have been removed from 1526 Land Title building, Philadelphia, to 808 Bellevue Court building, where they are much larger and the facilities for doing business greater. The importance of the association and its work to the interests of the Portland cement manufacturers has increased steadily with the size and scope of the association. A large office staff is being employed to perform the work. The outside force of inspectors has also been added to.

J. P. Beck, publicity manager of the Universal Portland Cement Co., Chicago, Ill., was awarded the \$1,000 first prize for the best constructive and suggestive essay on advertising by the awards committee of the Associated Advertising Clubs of America at the Toronto convention, held a few days ago. Mr. Beck's essay covered a hypothetical campaign for fireproof construction with concrete and dealt with the tremendous annual fire loss and annual fire tax, and the relief offered from that loss and taxation by safer and saner construction with concrete. Mr. Beck has been associated with the Universal Portland Cement Co. as publicity manager for a number of years. He is widely known in the cement industry as general manager of the Cement Products Exhibition Co., under whose auspices the annual cement shows are held. He was elected secretary and treasurer of the first National Conference on Concrete Road Building, which was held at the Auditorium hotel in Chicago last February.

## Will He Plunge?





The Lehigh Portland Cement Co. has moved its office in Pittsburgh to 614 Farmers' Bank building from 702 First National Bank building.

The annual outing of the employees of the general office of the Sandusky Portland Cement Co., Sandusky, Ohio, was held at Cedar Point, Ind., Sunday, June 7th. The good ships Altie and It were chartered for the occasion.

The Cranford Construction Co., one of the leading concrete construction concerns in Pennsylvania, has moved its office from the House building to the Keystone building on Fourth avenue, Pittsburgh, where it has very much better quarters.

The Iola Cement Mills Traffic Association of Iola, Kan., in the middle part of June filed with the Interstate Commerce Commission a complaint against the Santa Fe and "Katy" roads, alleging that unreasonable rates are charged for the transportation of cement from Humboldt, Ia., and Chanute, Kan., to Kansas City, Mo.

Bulletin 585, compiled by Samuel Sanford and Ralph W. Stone, issued by the United States Geological Survey, Department of the Interior, Washington, D. C., George Otis Smith, director, has just been sent broadcast. The title of the books is "Useful Minerals of the United States," and, as its title implies, is a complete compilation of all the minerals produced in this country and where they may be found.

Blaine S. Smith, assistant sales manager of the Universal Portland Cement Co., is chairman of the Illinois Committee of the Chicago Association of Commerce which recently toured 20 cities in Northern Illinois. E. K. Cormack, of the Wisconsin Lime & Cement Co., was also a member of the committee which took the trip. The object of the tour was to bring the cities of Northern Illinois into closer fellowship with Chicago.

C. M. Foster, who, as reported in ROCK PRODUCTS AND BUILDING MATERIALS recently, left Chicago to become special representative of the Edison Portland Cement Co. in Eastern territory, has been promoted to district sales manager and placed in charge of the Philadelphia office. The territory over which Mr. Foster will have charge includes New Jersey, Maryland, Delaware and eastern Pennsylvania. Mr. Foster was formerly secretary of the old Meacham & Wright Co., of Chicago.

The Union Cement & Lime Co., Louisville, Ky., recently held a meeting of the board of directors. John L. Wheat, who for 20 years has been at the head of the company, was re-elected president; Leo M. Parsons, heretofore for some time sales manager of the company, was elected to the office of vice-president and general manager, while E. P. Teague, for several years office man and city salesman for the company, was elected to the office of secretary-treasurer. In this capacity he succeeds F. A. Sampson, who resigned to go with the Germania Life Insurance Co. The directors of the company are Allen Carter, J. C. Parker, Louis Girdler, J. W. E. Bayly and Lee Robinson.

The Joint Conference on Uniform Methods of Tests and Standard Specifications for Cement, Richard L. Humphrey, secretary, feeling keenly the death of Alfred Noble, chairman, has forwarded the following minute to Mrs. Noble: "The Joint Conference on Uniform Methods of Tests and Standard Specifications for Cement hereby records with profound sorrow the irreparable loss sustained in the death of its chairman, Mr. Alfred Noble, and its deep gratitude for the privilege of having known and been associated with one who was the exponent of the highest ideals as a man, as a citizen and as an

## The BUILDERS' POET

### An Unofficial Interview

You ask me how I like the job of being President, and if I choose to give my views, as White House resident. Since this is true an interview I'll give you on the quiet, but I'll conceal JUST how I feel for fear I'll start a riot.

In dealing with the issues that confront me every day, I've got a hunch I earn my lunch and dinner anyway; and every night I'm weary quite, for every public question, it seems to me, is gradually destroying my digestion.

At present I'm confronted with a vexing situation; I'm hounded and surrounded by most every foreign nation. The Mexic mess, I must confess, is mixed beyond recall, and grim T. R., with mouth ajar, hangs o'er me like a pall.

The other day I interviewed a suffrage cause collection, and got a chill that augurs ill indeed for re-election. I thought a tame and simple game of golf would calm my spirit; but trouble there as everywhere, was foreordained to queer it.

The supposition seems to be that I am greatly blessed, with laugh and smile the hours beguile, and have four years of rest. If such a thought has lodged and caught inside your hopeful brain, take this from me, I'll never be induced to run again.

FRANK ADAMS MITCHELL.

engineer. Mr. Noble has given much to the engineering profession and his unselfish work in the development of the methods of testing cement has been of incalculable value. Many of his contributions to the engineering profession to be found in the Transactions of the American Society of Civil Engineers relate to this branch of engineering. He was a member of the Special Committee of this society which presented reports on Uniform Methods of Tests of Cement in 1885 and 1912. The members of this Conference find themselves unable to adequately express their loss. This intimate association with Mr. Noble has left in the memory of each member an indelible impression of his patient, sweet, endearing nature, of his simple, forceful, dignified personality and of the grandeur of his character."

#### CEMENT SHOW STOCKHOLDERS MEET.

The stockholders of the Cement Products Exhibition Co. held their annual meeting at the office of the company, 208 South La Salle street, Chicago, Tuesday, June 9.

The annual report of the directors showed the company to be in prosperous condition. The directors of the Cement Products Exhibition Co. are committed to the policy of paying no dividends, consequently such surpluses as occasionally remain are devoted to the promotion of future exhibitions. The following directors were unanimously elected:

Edgar M. Hagar, president Universal Portland Cement Co.

Norman D. Fraser, president Chicago Portland Cement Co.

D. McCool, president Newaygo Portland Cement Co.

A. Y. Gowen, vice-president Lehigh Portland Cement Co.

George S. Bartlett, vice-president Edison Portland Cement Co.

B. F. Affleck, general sales agent Universal Portland Cement Co.

W. E. Cobean, sales manager Wolverine Portland Cement Co.

J. U. C. McDaniel, sales manager Chicago Portland Cement Co.

J. P. Beck, manager publicity bureau Universal Portland Cement Co.

It was announced that the Chicago Coliseum has been leased for the eighth annual cement show, to be held February 10-17, 1915.

Judge John C. Pollock, of the United States district court at Topeka, Kan., has refused to dismiss the case brought by the Jackson-Walker Coal & Material Co. against Gov. George H. Hodges and the executive council, holding that a federal question is involved. Attorneys for the defendants asked the dismissal of the suit, on the ground that it was strictly a state affair. The material company asserted in its suit that it owns certain land within the corporate limits of Wichita, Kan., that includes a part of the river bed of the Arkansas river and that the state has no control over it. The case will be tried in its regular order on the federal court docket and will go far toward determining the validity of the Kansas sand tax.

The Building Material Exhibit, located in the Insurance Exchange building, Chicago, where it occupies the entire second floor with an array of exhibits of a prepossessing character, gave a luncheon Wednesday, June 17, to members and guests, there being about 60 present. Building Commissioner Ericsson, of Chicago, was the guest of honor. Chairman Foraker, of the Building Material Exhibit, presided and a number of short but interesting speeches were made tending to show the advantage of a closer fellowship of building material retailers. A committee was appointed by Chairman Foraker to lay out plans for the formation of a society which will have for its purpose the getting together of the members at least twice a month and discussing matters pertinent to the industry.

# The RETAILER

## Jewett Explains Significance of Spring Openings

On Way to Family Reunion, Stops Long Enough to Give Reason for Introducing Innovation.

George A. Jewett, president of the Jewett Lumber Co., of Des Moines, Iowa, called at the office of ROCK PRODUCTS AND BUILDING MATERIALS while on his way to attend a "Jewett" family reunion at Buffalo. Jewett traces his ancestry back to the days of the Pilgrims and beyond that to one generation in England. Giving the "Pilgrim" Jewett No. 1, Jewett figures that there have been over 12,000 descendants in this country. He declares that he is the 11,173d member of the family. The Jewett Family of America has incorporated and elected George A. Jewett president. They meet annually.

In addition to describing his family connections, Mr. Jewett explained the value and significance of an annual spring opening.

Spring openings are getting to be annual affairs in the building material yard of the Jewett Lumber Co. of Des Moines, Ia. Residents of Des Moines and the immediate vicinity have come to look at these "spring openings" as quite an innovation. George A. Jewett, president of the company, is the father of this plan and when asked for his idea, he replied:

"I have long been an interested onlooker on the spring openings of our department stores, dry goods, milliners and furniture establishments and realize that these institutions were giving the people a good opportunity to become acquainted with the newest things in their various lines. Then, I thought, why not in lumber and building material line also. Some people, in thinking of a board of lumber, little realize or care where it comes from; with them a board is a board. In the early days of Iowa we used altogether native lumber. Saw mills were scattered up and down the river. The early buildings in Des Moines were made from lumber manufactured just north of Des Moines and up about Polk City. With the coming of the railway we commenced to get our lumber from the Mississippi river, lumber which had been floated down the river, so then we commenced using pine. Later we shipped from Chicago lumber that had been brought down the lakes in cargoes, manufactured in Chicago and shipped out to Des Moines. The early lumberman did not have to carry a large stock of lumber. If the customer called today wanting something he did not have he could telegraph to the Mississippi river, it would be loaded tomorrow, and the next day would be in his yard ready to deliver to his customer. In building houses those days the carpenter had no choice; he must use the kind of lumber that he could get. Nearly everything was built of White Pine and Norway Pine, but now the occupation of the lumber dealer is vastly different; he must gather lumber from the four quarters of the earth as it were. A true lumberman must understand these various woods and must know what is best adapted to certain uses. He must know what lumber will make the best flooring for wear or what will make the best lumber for porch. The modern lumberman must take a half dozen different trade journals from these various sections in order to keep himself posted. When the ordinary citizen reads in the newspaper that there have been heavy rains and floods in the south, it is nothing to him, but the lumberman at once thinks as to what effect that will have as to

his supply of Yellow Pine and Cypress. If he reads that the building operations in California are very extensive, he at once thinks, what effect will this have on the supply of Redwood. If he reads that Australia and Japan are taking a large amount of lumber from the Pacific coast he at once considers what effect this will have on the supply of fir and cedar.

"The modern lumberman should be prepared to advise his customer as to the use of various woods, and as to the use of various other building materials. Then I thought, why not have an exposition of building materials so as to give the consumer and the builders an opportunity to study these various goods and to get information at first hands; that is from the representatives themselves, men who have been sent from these various sections to sell this lumber here. Let them tell of the special qualities to the lumber which they represent.

"I have attempted to make our spring opening educational for the consumer just as this Forest Products Exposition was educational for the lumber dealer and contractor on a larger scale. We are well pleased with the reception accorded our opening."

As Mr. Jewett's lumber business is quite extensive, he had representatives of the various concerns on hand to explain the merits of such woods as Arkansas soft pine, Louisiana red cypress, yellow pine, fir, cedar, etc. In addition to the lumber exhibits there were plaster, cement, roofing and other building material displays.

Mr. Jewett is to be congratulated on the progressive business methods he is pursuing and deserves the success which is his.

### Efficiency Among Teamsters.

This is the age of efficiency. Efficient help is one of the most vital factors in every successful business undertaking of today. There are two ways in which efficiency may be secured. The most desirable method is the one which brings to you employees who have the necessary knowledge and who of their own volition choose to do just a trifle more than they have been hired to do. The other method is the one usually resorted to by employers of labor. It consists of instructing and compelling your employees to perform the tasks assigned them.

In every building material yard, it is necessary to hire laborers. It is with this class of help that inefficiency is most noticeable. This is due either to the ignorance of the labor or it may be caused by the knowledge that his work is of a menial nature and that he is not as carefully watched as the highest priced help. Force must be used in securing a good day's work from this class of employees.

Teamsters are more apt to give their employers satisfactory service, but even they must be told and re-told the extent of their various duties. But notices posted either in the barns or those sections of the offices which teamsters enter prove valuable adjuncts in securing efficiency in the delivery of materials. E. L. Merriman, manager of the Paragon Plaster and Supply Co., of Scranton, Pa., uses the "notice" idea to good effect in handling his

teamsters. The office of the Paragon Co. is located at the entrance of the yard; and all teamsters entering or leaving the yard are instructed to report at the office. While the teamster is waiting for instruction or for the clerk to make out a bill, his eyes naturally roam around the office and rest upon framed typewritten instructions, which read as follows:

#### NOTICE TO TEAMSTERS.

All teamsters to report at the barn not later than 6 a. m.

All teamsters to report at the warehouse not later than 7 a. m.

All teamsters are held responsible for trucks and wagon covers.

All material in bags must be placed under cover on jobs, excepting lime, sewer pipe, flue lining, brick and sand.

Teamsters must ask for empty bags at all jobs and report the return of same at the office.

Do not take any wet or worthless bags or materials from any job.

Do not deliver material on second floor on any job.

Teamsters must always count material when loading.

Be sure to get delivery tickets signed at jobs.

### Sand Selling Agency Organized.

Five Chicago Concerns Form Standard Sand & Gravel Co. to Dispose of Materials.

For the purpose of cutting down overhead expense and for the economical distribution of sand and gravel, five Chicago companies have organized the Standard Sand & Gravel Co. and are consolidating their sales departments.

Recent labor troubles, which caused a depression in the sand and gravel business in Chicago, and an effort to save sales office expenses are given as the reasons for the new organization, which was incorporated on July 2 as the Standard Sand & Gravel Co., with a capital of \$20,000. The incorporators are John T. Richards, John F. Voight and Raymond J. Darby.

The five companies interested in the consolidation and the presidents of each are:

Lake Shore Sand Co., C. H. Steppins.

Richardson Sand Co., Frank M. Richardson.

American Sand & Gravel Co., N. C. Fisher.

McLaughlin Building Material Co., John J. McLaughlin.

Atwood-Davis Co., Charles H. Brand.

The consolidation of the various sales offices will be effected within the next month and an office will be open in the Chamber of Commerce building.

"Recent labor troubles and the attendant depression in our line of business has made it necessary to do something toward cutting down overhead expenses," said N. C. Fisher, president of the American Sand & Gravel Co. "That is absolutely the only reason why we are effecting this consolidation of sales departments. Several of the firms may then do away with their loop offices. We also expect to realize a big saving in handling and delivery of materials."

The organization will be along a line similar to that of the Producers' Stone Co., which handles the selling and delivery work for several stone companies, according to Mr. Fisher. The five companies will have a combined daily output of about 250 cars of sand and gravel. The greater part of the business will be in Chicago and surrounding territory for a distance of about 100 miles. The companies' pits are at Algonquin, St. Charles and Carpentersville, Ill., and Beloit, Wis.



# Merchandising That Wins

## Aggressiveness is Feature of Thriving Business

Fischer Lime & Cement Co. Demonstrates What Can Be Done in Memphis With Complete Line of Materials and Up-to-Date Methods.

Aggressiveness is the principal feature in any building material business where healthy and prosperous growth is desired. Such a concern must have splendid sales methods and the ability to get and hold trade. Its lists of materials regularly carried in stock must be complete and include up-to-date and standard supplies—goods back of which stand responsible manufacturers, ready at all times to co-operate to the fullest extent and assist in the sale of their materials. A concern of this nature is a help to the community in which it is located; it is a blessing to architects and an aid to residents who endeavor to build up their city with substantial as well as artistic homes.

Memphis, Tenn., has a building material business of this nature and it is none other than the Fischer Lime & Cement Co., which is owned and managed by W. W. Fischer. It was years ago that Mr. Fischer, as a boy in the employ of one of the building material concerns of Memphis, began to study the requirements of a successful retail concern. After having served his apprenticeship and with a fair knowledge of the essen-

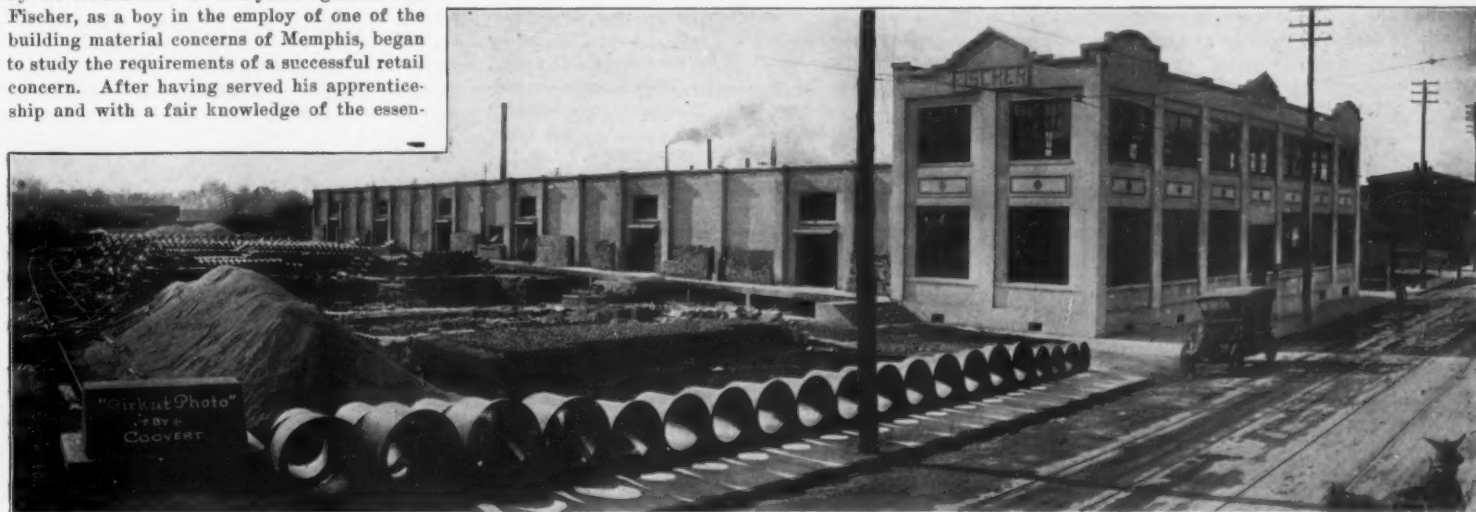
tials of leading materials and will go to any length to make connections with such concerns. It is said that in one instance a competitor was the sole agent of a line he wished to sell. The competitor also had some very desirable accounts. In order to get the agency and the accounts, Mr. Fischer bought the entire business of his competitor.

Whenever an inquiry is referred to the Fischer Lime & Cement Co., the manufacturers well know that the reference to a prospective customer is not received and discarded. Mr. Fischer treats it as a live prospect and puts a man right on the trail. Mr. Fischer has at least two salesmen covering the city of Memphis in automobiles and one on the road. He insists upon getting and does get his share of the business in the Memphis market. If all the building material dealers in the country were as

stored in front of the warehouse, as is seen in the picture.

There are over 200,000 square feet of warehouse and yard storage space at this warehouse of the Fischer Lime & Cement Co. In addition to the trackage shown, there is a switch running directly into the warehouse. This plant has a loading capacity of 30 cars daily. The yards of the Fischer Lime & Cement Co. are located advantageously and a full line of builders' supplies always kept on hand in each yard.

Fischer and his crew of salesmen are known to every architect in the city of Memphis, through his systematic system of keeping after the trade, and there is scarcely a job in Memphis on which he does not have early information. He keeps constantly in touch with architects, builders and con-



OFFICE, WAREHOUSE AND PART OF YARD OF FISCHER LIME & CEMENT CO., CONSTRUCTED AT MEMPHIS, TENN. BUILDINGS WERE ERECTED OF REINFORCED CONCRETE.

tials of the building material industry, he branched out for himself, doing not only a retail business in Memphis but a jobbing business as well, and reaching into the state of Tennessee, Mississippi and Arkansas.

Early in the game Mr. Fischer learned that it was necessary to secure complete information about every article which he handled, and took advantage of the knowledge of salesmen and manufacturers' representatives who called on him. With this information he made himself a power in the Memphis market by systematically handling a complete line of standard goods.

Possibly the secret of the success of W. W. Fischer is his co-operative policy. He knows how to secure co-operation from manufacturers; and after having it in his possession, he knows how to use it. He is a close buyer and, in addition to the materials which he purchases, is bound to receive a full quota of advertising help in the shape of pamphlets, daily newspaper advertising and the like. With this assistance from the manufacturers he goes after the business with a vim and enthusiasm so much desired by building material retailers.

Mr. Fischer believes in representing manufac-

progressive and up-to-date as Mr. Fischer, an outsider would have no show. This company keeps a line on everything in its market and, being prepared to furnish materials from its immense stocks, an outsider cannot go into Memphis and get business.

His warehouse space has always been ample, and as the business increased, his warehouse and yard space likewise increased.

In 1911 the Fischer Lime & Cement Co. constructed in Memphis the most complete and up-to-date building material office, warehouse and yard to be found in the South. This new office and warehouse is shown in the accompanying illustration and is built of reinforced concrete throughout. The office is shown to the right and the warehouse in the center is constructed in such a manner that wagons can drive directly into it and be loaded during the evening or in the early morning, so that when the teams are ready at the accustomed hour they can be hitched to the wagons and started for the destination of the material without delay.

Immediately behind the warehouse is a large yard completely roofed, for the protection of materials which are stored there. Clay products and such materials as are not affected by the elements are

tractors by the use of his follow-up lists and the distribution of advertising matter supplied him by manufacturers of the various materials which he handles.

To demonstrate the completeness of the lines of material carried by the Fischer Lime & Cement Co., Mr. Fischer has supplied us with the following list of supplies:

- Lump lime in bulk and barrels.
- Hydrated lime.
- Portland cement.
- Natural cement.
- White cement.
- Imported stainless cement.
- Keene's cement—regular and superfine.
- Hardwall plaster—fibered and unfibered.
- Wood fiber plaster.
- Finish plaster.
- Casting plaster.
- Moulding plaster.
- Dental plaster.
- Universal finish.
- Sewer pipe and connections—3 inch to 42 inch—standard and double strength.
- Drain tile.
- Well curbing.
- Clvert pipe.
- Gutter pipe.
- Raggle block.

(Continued on Page 18.)

# NEWS of the TRADE

## Chicago Shows Healthy Growth.

### Figures Compare Favorably with Former Years and Dealers Are Optimistic.

Building construction, as indicated by the permits issued at Chicago's city hall for the twelve months ending May 31, total \$83,491,690. As a rule, the figures given in the permits are conservative and it is estimated that the actual value of the buildings erected will go 25 per cent above this mark. This will bring the figures well over the \$100,000,000 mark for the last year.

In view of the many unfavorable conditions which have surrounded business operations in Chicago during the present year, a surprisingly good showing has been made.

It is true that a large decrease is shown as compared with the corresponding period for 1913, amounting to 503 permits with a total cost of \$6,157,700 for the first five months of the year, according to the figures of the city building department. This is robbed of its sting, however, by reason of the fact that building operations during the early part of 1913 were on an unprecedentedly large scale, the increase in cost of the permits over those for the corresponding period of 1912 amounting to about \$10,000,000. Still the year 1912 showed an exceedingly large total for the year's operations, amounting to \$88,180,800, exceeded only twice in the history of the city, and at the finish was only about \$1,000,000 behind that for 1913, despite the big lead secured in the early months.

The five months of the present year materially exceed those for the same period of 1912, during which practically normal business conditions prevailed, making the showing for the present year of a surprisingly favorable character. From this fact many builders, architects and dealers believe the year's totals should exceed those of both of the other years with which comparison has been made. This certainly should be the case if there is anything approaching a realization of the rapidly growing hopes as to a pronounced business revival during the latter part of the year.

The most unfavorable factor in the building situation was, of course, the brickmakers' strike. Many new projects were also postponed waiting a clearing of the business atmosphere, and this applies to a multitude of small enterprises as well as those of a more important character.

Building material dealers, while unanimously deploring the fact that the brickmakers' strike interfered with business during the early part of the season, report that business at the present time is quite satisfactory. June shows a good month and July has started out fairly well, considering that July and August are usually dull months.

William P. Varney, of the Hydraulic-Pressed Brick Co., reports that "building conditions just at the present are not the brightest in the history of the city, but that is no indication that we do not look forward to a prosperous year. The brick strike held back operations, especially in the construction of apartment houses. Owners who contemplated having their buildings ready for rental in the fall are holding back now with the intention of starting work in the fall so as to have their buildings ready for occupancy in the spring. For this reason, business should be exceptionally good in the fall. It is a peculiar fact that no matter how great the business depression is in other parts of the country, Chicago shows but little effect of it, especially in our line of business."

Speaking of the cement situation, J. J. Chittenden, Jr., assistant Western sales manager of the Lehigh Portland Cement Co., says: "We are well pleased with the business we are receiving, 95 per cent of which comes through retail dealers. Conditions in the Northwest are exceptionally good and we look for a good fall business from this section."

Frank A. Mitchell, general manager of the Ceresit Waterproofing Co., reports that the business of his company is in splendid condition. "The first six months of 1914 shows a gain over the same period of 1913," says Mr. Mitchell, "with June business doubled. We are well pleased with our progress and are glad to report that building material dealers are taking more interest in and investigating the merits of waterproofings."

Bonner & Marshall Co., Chamber of Commerce building, report very gratifying results for the month of June and, notwithstanding the fact that July and August are usually quiet months, are receiving daily a good share of brick orders. They also advise that their business for the first six months of 1914 was much better than the corresponding period of 1913. Prospects are fine and by September they expect to be moving in full swing.

R. E. Wilcox, of Wilcox Co., 3690 Milwaukee avenue, said: "We are doing a mighty good business in both our wholesale and retail yards and receiving a great many orders from the country. Locally, especially on the Northwest side, orders are simply piling in and prospects are favorable for good and active business during the late summer and early fall months." Mr. Wilcox was asked how the first six months of 1914 compared with the last six months of 1913 and he readily replied: "I would frankly state that our business for 1914 shows an increase of 33 1/4 per cent over 1913."

National Brick Co., 118 North La Salle street, report that business is improving and orders of fairly good size coming in quite frequently. Although tied up by the recent brickmakers' strike, they claim business conditions are proving much better during 1914 than they were the latter part of 1913.

Mr. Matz, of the S. S. Kimball Brick Co., 304 Chamber of Commerce building, reports: "Business during the month of June was pretty lively and July seems to have started off on the same track. We are receiving a good supply of orders, there being quite a number of churches and convents under construction. Deliveries are fine and I certainly look for a very good fall business."

Meacham & Wright Brick Co. report that the month of June produced just twice the amount of business as did June, 1913. The first six months of this year are away ahead of the first six months of last year.

The special permit requested by Mayer & Meyer for the construction of a 260-foot hotel to replace the present Stratford Hotel on Michigan avenue and Jackson boulevard was decided against by the city council. The aldermen were practically unanimous in deciding against the Stratford permit, and while some favored a restricted territory in which buildings of that size might be constructed, the final action of the council limits the construction of future building in Chicago to the 200-foot limit now in vogue.

The Mosaic Tile and Mantel Dealers' Association, of Chicago, Ill., has recently been incorporated to promote the sale of tile, mantels and mosaic work throughout Chicago and Cook county, with the fol-

lowing officers: President, J. J. Walsh, Walsh & Wahl Mantel & Tile Co.; vice president, Max Weinberg, Builders' Outfitting House; treasurer, Gus Schwartz, American Mosaic & Tile Co.; secretary, H. E. Williams, Williams-Wendt Co.; chairman executive committee, J. C. McGrath.

## Milwaukee Dealers View Situation.

### W. H. Pipkorn and Charles Weiler Express Opinions on Local and General Conditions.

Milwaukee, Wis., July 3.—According to Milwaukee retailers, the demand for building materials during the spring months was not as active as it should have been, but began to pick up during the month of June. In fact, W. H. Pipkorn, president of W. H. Pipkorn Co., reports that June was considerably better than last year. "As far as I have been able to size up the situation here (and I think I have observed it very closely) it is hard for me to refrain from firing the old gun along the same lines the way I have always done," says Mr. Pipkorn. "I hope I will never see the day when I am obliged to howl about conditions."

"Business was not quite as brisk during the month of March and April as it was the same months last year. June, however, has been considerably better than last year. As far as I am concerned, I think prospects are better than last year by a good ways, and I have based my observations on several almost unfailing indications. For instance, the crop indications were never better in a good many years than they are at the present time. If the crop indications continue to show such signs as they have it is almost impossible to predict anything but prosperity for the late summer and fall months in every line of business."

"We are surely going to have a car shortage and the man who is wise and will stock up a little bit will have the goods to sell when the other fellow cannot get it. I feel that this will also apply to the manufacturers as well as the dealers."

Charles Weiler, treasurer of the Western Lime and Cement Co., is not inclined to be entirely optimistic. Mr. Weiler has just returned from an Eastern trip and has made a study of conditions in New York and the New England states. "Business is plainly depressed and away below normal in this city and section," says Mr. Weiler, "but if I may believe all I heard in New York and New England it is very much worse there."

"Being an old-fashioned, stalwart Republican and out of sympathy with the present socialistic tendencies of politics, I cannot help thinking the depression is directly due to the persecution of all business by politicians; some of them are honest enough in their 'theories,' and some are mere blatant demagogues, while both are sore afflictions to our misguided and long suffering fellow-citizens."

"Prosperity is a condition which must be practically universal if it is to be permanently beneficial. We are all in the same train, traveling the same road, and headed for the same destination. Neither the farmer nor the laborer can have any real prosperity if the employer is singled out for vicious attacks, and his employing power crippled by drastic tariff and taxing legislation."

"If our country is to be saved from socialism and anarchy, the people must put a stop to the present-day orgy of class legislation, and revert back to the wise counsel of Jefferson in his advice to the founders of the republic, when he said, 'That country is governed best which is governed least.'"



### Little Change in Pittsburgh Conditions.

Pittsburgh, July 6.—Conditions in this district have changed but very little during the past two weeks. Business is irregular. Some concerns report a fairly good trade. In other parts of the city where building is less active very little is doing. The same is true of the suburbs and towns throughout the Tri-State territory. In general, it can be said that street and road work is very much less in evidence than one year ago. Building projects probably average about the same, especially with reference to small building. Prices are being badly cut and all dealers report that profits are low. There is much complaint that many of the best contracts for the big building being erected down-town are going direct to manufacturers, thus cutting the retailer and jobber out of a large amount of legitimate business. The prospects are, if anything, for better business late in the summer. It is generally believed that when the rate decision is handed down it will give the railroads at least an excuse for turning loose a large number of contracts which are now being held up and to this most business men look for a sharp revival in buying.

The Crafton Builders' Supply Co. lost \$2,000 today by a fire in its retail lumber and builders' supply plant at Crafton, a south side suburb of Pittsburgh.

The Huntingdon Mill Work and Lumber Co. has sold its plant at Huntingdon, Pa., to Hoffman, Lorenz & Co.

Carl Van der Vort, secretary of the Pittsburgh Lumbermen's Mutual Fire Insurance Co., reports business much better than last year. He says most retail lumber firms are doing a fairly good business this summer.

George Lanz & Sons have bought a plot 150 x 120 feet at South Nineteenth and Mary streets for \$22,000. They will use this as a site for their building supply business.

The W. H. Williams Co. reports business fairly good. Its total for the year is about the same as for the first six months of 1913 and the trade is well distributed.

McCrady Brothers Co. at Bradflock, Pa., announced that business up the Monongahela river is rather quiet. This is due to the fact that the steel mills are running only 60 per cent capacity and are doing very little building or repair work. Also there is little or no road and street work being let.

The East End Builders' Supply Co. is pretty busy, especially in gravel and cement deliveries. Most of its trade is for small building and repair work. Its totals for the year are much better than in 1913 except in sewer pipe.

The feature of the situation, so far as country towns and boroughs are concerned this year, is the large number of bond issues which are being put through for paving, grading, sidewalk, waterworks and sewerage projects. Money is quite plentiful and all municipalities find it easy to sell good bonds. On this account partly, and partly because labor is somewhat cheaper than it has been, more such projects are up than for years. This is helping in part to balance up for the lack of street contracts in the city of Pittsburgh, where city funds for this purpose are not in large amount.

### KANSAS CITY RETAILERS ACTIVE.

Kansas City, July 3.—Retail supply men have been fairly active recently, late developments being favorable rather than otherwise. The coming month is expected to be a good one, building permits having held up well and other indications being favorable. Most of the retailers, as well as other business men, are talking big business. That means, according to psychologists, that big business will materialize as a matter of course.

The J. P. Sprague Co., one of the leading building material concerns of Kansas City, has secured the reinforcing steel contract for the new Muehlebach hotel. About 350 tons will be delivered.

Country trade, according to officers of the company, has proved highly satisfactory and will be sought with more than usual aggressiveness.

The mystery surrounding the disappearance of Walter J. Wood, manager of the Kansas City, Kan., offices of the Bargain Lumber & Salvage Co., was dissipated recently, when Mr. Wood was located in a hospital at Seattle, Wash. The lumberman is recovering from a lapse of memory. He will be taken to Minneapolis for the summer, and will recover his former good health shortly, it is believed. Mr. Wood's disappearance is attributed to mental aberration brought on by hot weather.

### Retailers Await Letting of Contracts.

#### Louisville Dealers Competing for Large Brick Orders—Business Normal With Gain Over Last Year.

Louisville, Ky., July 3.—Interest among Louisville retailers centers as yet on the contracts to be let in the next few days for the face brick, 175,000 interior and 234,000 exterior, for the new boys' high school. Several of the dealers have prepared panels at the headquarters of the Board of Education, from which the members of the building committee will make their selections. R. B. Tyler & Co. have four panels, the Tyler Building Supply Co. eight, the Union Cement & Lime Co. three, while other dealers have sample bricks on display.

The specifications call for a variation of the Flemish bond, two stretchers and one header alternating in the various courses, the stretchers to be set close at the perpendicular joints so as to give the effect of a Norman brick at the cost of a standard brick. The panels have been prepared in this fashion, the R. B. Tyler Co. using plain mortar, the Tyler Building Supply Co. black mortar, while the Union Cement & Lime Co.'s panels are laid variously in black, cream and French gray mortars. Bailey & Koerner, general contractors for the building, have not as yet given the contracts for the interior brick to be used in the courts and lunch rooms, etc., and it is expected they will wait until the board decides what brick it will select for the exterior.

Business continues virtually normal for the season. The bulk of it is made up of small orders for small jobs, though the sum totals are rather satisfactory to the majority of dealers. The records of the office of the city building inspector continue to show marked gains compared with similar periods for the year before. June saw a total of 202 permits, amounting to \$517,540, comparing with 203 permits issued during June, 1913, at a cost of \$367,780, showing an increase of approximately \$160,000. The first six months of 1914 show an increase of \$150,000 over the same period of 1913.

These records indicate unmistakably that there is more business being done in Louisville than there was done last year. It is split up among more concerns, there being more of them in the business. Last year, for instance, the Louisville Builders' Supply Co., which is cutting a considerable figure in the trade this season, had hardly got under way and the Union Cement & Lime Co. had not gone extensively into the builders' supply line, while the Tyler Building Supply Co., Isaac Tyler, president, has succeeded Owen Tyler in the field.

A good deal of the retail business of the supply houses which handle lime and cement is coming in in the shape of orders from the farming sections where the cement is used in constructing concrete silos, while the farmers are paying more attention to liming their fields.

### NEW MISSOURI SUPPLY COMPANY.

Caruthersville Sand & Supply Co. has been incorporated with a capital of \$3,000 at Caruthersville, Mo., to engage in the builders' supply business. The incorporators are J. A. Riggs, J. W. Carmean and Samuel Haye.

### Building Material Prices.

#### Chicago.

There is practically no change in the retail prices of materials since the last issue of ROCK PRODUCTS AND BUILDING MATERIALS. Practically all dealers report an increase in the sales, but prices remain about the same. Current prices are:

Cement plaster, \$8.50 to \$9.50 per ton.  
Wood fibre plaster, \$9.50 to \$10.50 per ton.  
Plaster board, \$16 to \$17 per 1,000 square feet.  
Face brick, \$14 to \$30 per 1,000.  
Portland cement, cloth sacks, \$1.60 to \$1.70.  
Lime, 200-pound barrel, 60c to 70c.  
Torpedo sand, 6 1/4c per 100 pounds.  
Bank sand, 5c per 100 pounds.  
Crushed gravel, 6c per 100 pounds.  
Crushed stone, 6 3/4c per 100 pounds.  
Roofing gravel, 7 1/4c per 100 pounds.

#### Philadelphia.

Philadelphia, Pa., June 26.—Market quotations on building materials to consumers are:

Face brick, \$20 to \$30 per 1,000.  
Rough texture brick, \$20 to \$30 per 1,000.  
Tiled face brick, \$60 per 1,000.  
No. 1 rolling mill fire brick, \$35 per 1,000.  
Lime, in bulk, 27 cents per bushel; in barrels, 85 to 90 cents.

Sand, per cubic yard, at the yards, \$1.25 to \$1.85.  
Pebbles, per ton, \$1.30.  
Stone, crushed, delivered in the city, \$1.70 per ton.

Gravel, \$1.25 per ton.  
Portland Cement, in cotton bags, 94 lbs., \$1.59.

#### Pittsburgh, Pa.

Pittsburgh, July 6.—Prices on building material in Pittsburgh delivered to the consumer are quoted as follows today by leading retailers:

Sand, 5 and 6 cents a bushel for downtown deliveries.  
Cement in paper sacks, \$1.50 to \$1.60.  
Sewer pipe, 68 per cent off list.  
Common building brick, \$10 per thousand.  
Face brick, \$13 to \$20 per thousand.

#### Louisville, Ky.

Louisville, Ky., July 3.—Retail prices on the local market run as follows:

Sand and Gravel—Sand (at the yards), 60 cents per cubic yard; gravel (at the yards), 75 cents per cubic yard; roof gravel (at yards), \$1.25 per cubic yard.

Cement (all on cloth basis)—Delivered, l. c. l., \$1.90; warehouse, l. c. l., \$1.80; car lots, f. o. b., \$1.65.

Lime—Per barrel, 90 cents; in bulk, per 80-lb. bushel, 28 cents.

Crushed stone—2 1/2-inch, carload lots, f. o. b., 90 cents per cubic yard; 2 1/2-inch, l. c. l., f. o. b., 96 cents per cubic yard; screenings, f. o. b., 75 to 80 cents per cubic yard.

#### Kansas City.

Kansas City, July 3.—The market on crushed rock, lime and sand and gravel has shown little variation from quotations of a month ago. Lime, in wagon load lots, is held at 32 cents a bushel for standard products. Ash Grove is quoted at 37 cents.

#### San Francisco.

San Francisco, July 3.—Material prices in San Francisco, owing to the increased activity in building, are in a rather better position than earlier in the year, though there is still considerable irregularity in some lines. The price of cement runs about \$2.40 per barrel with a rebate of 40 cents per barrel on the return of sacks. Lime prices seem to be rather unstable, with some dealers quoting as low as \$1 per barrel, though the average is about \$1.50 on the job. Crushed stone and gravel are quoted at \$1.25 per cubic yard at the bunkers. Ordinary bank sand for brick layers' use is selling at \$2 per load of two cubic yards delivered, while plaster sand is bringing from \$3 to \$3.50 per load delivered.

## BUILDERS' SPECIALTIES

### Specialty Man Considered a Necessity

Ohio Dealer Believes that Special Salesman Should Be Designated to Sell Brick and Mortar Colors.

"Have you a specialty man?" the Retail Editor asked of a prominent Ohio builders' supply dealer.

"Most assuredly," answered the dealer; "we have several of them. Unlike a good many concerns, we classify brick as a specialty and until recently we had a man putting in his time on nothing but the brick end of our business; but recently, after numerous conferences, we have decided that mortar colors are ideal to handle in conjunction with brick. The man who sells brick naturally offers information relative to how the brick should be laid up and it is then that he has a chance to advocate the use of certain mortar colors, always adding a few words to the effect that 'we can supply what you want.' If the conversation between the brick salesman and the prospective customer is held in our office the mortar colors can be shown him from our samples. If the salesman is at the office of the prospect, the question of mortar colors might be an inducement to get him in our office where he can see the brick laid up in the mortar color desired."

"What are the specific duties of your salesman who makes a specialty of selling brick and mortar colors?" asked the Retail Editor.

"To get the brick and mortar color business of our city," quickly replied the dealer. "But to go into detail, let me explain that his hands are full. We selected for this position a young man who has been with us for years and who has grown up in the business, a man who knew by name every one of our customers, and whose personality we felt sure would put us in touch with every architect, builder and contractor who were not regular customers. We have not been disappointed, because our salesman has the knack of holding the attention of every one that he calls on and by his clever method of presenting arguments in favor of any particular brick he has succeeded in securing the good will of practically every architect in town. Many of these men were unknown to our institution before we placed a specialty man in charge of our brick sales."

"We have placed him in entire charge of our brick sales department and there is not an order received by anyone in this institution unless the information is turned over to him at the earliest possible moment. It is his duty to report the results of his work every day to the general manager. This he does on printed blanks furnished him for that purpose. These contain lines for the name and address of the prospect, his business—whether an architect, contractor, builder, etc.—the name and location of the prospective job, the size of the job, quality and texture of the brick desired, the approximate number of brick needed and the salesman's opinion as to who will receive the order. We have keen competition for the brick business of our city and it is absolutely necessary that we keep in close touch with every job."

"Our brick salesman, or specialty man, spends practically all of the time between the hours of 9 a. m. and 4 p. m. out of the office. Before he makes his first call in the morning he reports to the office and takes care of what correspondence that may have come in the morning's mail. He makes a practice of calling on architects in the morning; in the afternoon he secures in every possible way and from every available source, information relative to new jobs. In this way we figure we are in touch with the brick situation of our city, and we are sure to receive a fair percentage of brick orders."

"After 4 p. m. architects and others desire to be

undisturbed. They need the rest of the day to put the finishing touches to their regular work. It is only by appointment that our brick specialty man will make a call after that hour."

"Does your specialty man find it necessary to work evenings?" asked the man with the "nose for news."

"Oh! yes," replied the builders' supply dealer. "Quite frequently we figure on jobs such as churches, club houses and similar structures where committees are usually appointed to secure information, prices and samples and in some instances to decide upon the brick. These men can not always be seen during the day and it is advisable to make an appointment with them at night. When evening appointments are made our salesman has found it to his advantage to meet these committees on their own grounds, or in their own structures. For instance, a committee who is in charge of the erection of a new church will be met at the church; club members will be met at their clubs. Our salesman has developed his ability to talk to more than one man at a time, and is at the present time in fact quite a lecturer on brick. He finds it necessary to meet a committee of anywhere from three to 12 members and calls upon them with his sample case loaded with brick and sufficient information about those brick to give them a good 20 or 30 minutes' talk. This is usually followed by answering the questions which are hurled at him by members of the committee. Knowing practically all there is to know about brick, he is prepared to answer them intelligently and as a result always leaves an impression which is favorable and which in a good many cases helps to secure the order."

"Do you ever try to have these committees meet at your brick display room?" the dealer was asked.

"Yes, but not until our salesman has called on them in a place where they feel at home and feel more free to ask questions," was the prompt reply. "Then when they become better acquainted with our salesman and his article, he invites them to come to our display room and see the brick laid up similar to the manner in which it will appear in the finished structure. He usually tries to get the committee together during the day, in order that they might see the brick in daylight. He asks them to meet at our office and arranges to be there personally to receive them. This is a very good idea, we think, because it brings the members of the committee there one at a time. As each is received he is shown with courtesy through our institution, especially that part of it which pertains to the handling and selling of brick. Then as he returns to the brick display room he is again told the advantages and desirability of the brick which the salesman is trying to sell. It is much easier to impress an individual person than an entire committee, and the salesman tries to get in a lot of hard work before the committee is there as a whole. By impressing each individual member, as he arrives, with the desirable features of the brick and of our interest in behalf of the institution whose building is about to be erected, he is almost certain to secure the order before the committee disbands. As a rule, these committees are made up of men who are busy and who cannot afford to spend much of their time during the day discussing these things. By doing individual missionary work each one is impressed and ready without much discussion to state his opinion of the brick when the committee as a whole decides the final selection of the brick."

"When does your salesman talk mortar colors to them?" was the next question asked of the retailer.

"At every opportunity," was the reply, "but especially when they are shown the brick as they appear in the panels in our brick display rooms."

"While most of our panels are laid up in actual mortar we have a number of panels which are made up of loose samples. Stored away in our warehouse are samples of every brick that we sell, and when we are trying to impress a committee or an individual with brick that is not regularly on display we have one of our men substitute such brick for those in one of the loose brick panels. In such instances, in place of mortar we use wooden strips of the desired thickness and stained the color of the mortar most desirable for use in connection with the brick shown."

"We are of the opinion that in the selling of brick a specialty man is absolutely necessary. We feel that we cannot do without him and that he should not be tied up with too great a variety of supplies. We firmly believe that brick and mortar colors are the two best materials to associate and can be successfully sold by the same man."

### AGGRESSIVENESS IS FEATURE OF THRIVING BUSINESS.

(Continued from Page 15.)

Wall coping.  
Fire brick—square and shapes.  
Grate backs.  
Side, center and back boiler tile.  
Square edge tile, bake oven tile, stoker tile.  
Special tile for patent boilers and smoke consumers.  
Flue lining, round flue pipe.  
Stove thimbles.  
Chimney tops.  
Clay partition tile, clay fireproofing.  
Gypsum blocks.  
Asbestos shingles, cement, roofing, paper.  
High temperature cement.  
Rubber roofing.  
Slate surfaced roofing.  
Asphalt shingles.  
Building paper.  
Slaters' felt.  
Deadening felt.  
Deadening quilt.  
Roofing felt.  
Roofing pitch.  
Coal tar.  
Asphalt.  
Waterproofing—liquids, pastes, powders, paints.  
Shingle stain.  
Cement stain.  
Cement coating.  
Roof paint.  
Cement floor hardener.  
Rope oakum.  
Plumbers' oakum.  
Crushed limestone, granite, marble.  
Bank sand, white sand.  
Plaster board.  
Wood lath.  
Channel iron.  
Tie wire.  
Plastering hair.  
Post caps.  
Joist hangers.  
Wall plugs.  
Expanded metal lath—plain, painted and galvanized.  
Plain wire lath.  
Painted wire lath.  
Galvanized wire lath.  
Rod stiffened wire lath.  
V-Rib wire lath.  
Corner bead.  
Exterior cold water paint.  
Interior cold water paint.  
Wall board.  
Concrete mixers.  
Post moulds.  
Concrete block machines.  
Stanchions.  
Brick clamps.  
Cement finishing tools.  
Pyrobar gypsum tile.  
Sackett plaster board.  
U. S. G. wall plasters and finishes.  
Whitewash brushes.  
Whitewashing and spraying machines.

Assisting him in conducting the business of the Fischer Lime & Cement Co., Mr. Fischer has the valuable services of his brother-in-law, William Fry.



The market place of the building material industry. Employment department, machinery wanted and for sale, etc. If your wants are not answered in this page, write a letter to this office.

**THE FRANCIS PUBLISHING CO.**  
537 S. Dearborn Street Chicago, Illinois

# :: THE :: BOURSE

Advertisements will be inserted in this section at the following rates:

For one insertion.....35 cents a line  
For two insertions.....45 cents a line  
For three insertions.....60 cents a line  
Eight words of ordinary length make one line.  
Heading counts as two lines.  
No display except the headings can be admitted.

Remittances should accompany the order. No extra charges for copy of paper containing the advertisement.

## EMPLOYMENT WANTED

WANTED—position as quarry superintendent: 25 years' experience in construction and operation of crushing plants. Would operate on percentage basis. Best of references. Address Box 1002, care ROCK PRODUCTS & BUILDING MATERIALS.

## EMPLOYEES WANTED

WANTED—An experienced man that understands the handling of Gypsum Products and could take charge of a Sanded Nout Plaster Mill that has a capacity of 100 tons per day, but is only averaging about 40 tons per day. This position is permanent to the right person. Location, Indianapolis, Indiana. Answer Box 1003, care ROCK PRODUCTS & BUILDING MATERIALS.

WANTED—Experienced Lime Salesman familiar with trade in Kentucky and Tennessee, to work on salary or commission basis. State age, experience and salary expected. Address LIME, care ROCK PRODUCTS & BUILDING MATERIALS.

## MACHINERY FOR SALE

### FOR SALE

- 1 300 h. p. Sterling Water Tube Boiler.
  - 1 150 h. p. Sterling Water Tube Boiler.
  - 4 100 h. p. Tubular Boilers.
  - 12 Griffin Mills.
  - 12 6'x60' Rotary Kilns with Linings.
  - 6 5x18 Wet Tube Mills.
  - 1 500 h. p. Hamilton-Corliss Engine.
  - 1 250 h. p. Erie City Engine.
  - 2 200 h. p. Buckeye.
  - 1 each, 20, 35 and 50 h. p. Engines.
- Large quantity of shafting, pulleys, etc. \*All situated in the New Bronson Portland Cement plant, Bronson, Mich. Will sell all together or separately. Address NEW BRONSON PORTLAND CEMENT CO., Bronson, Mich.

### FOR SALE.

- 1 Portable steam steel Derrick (McMyler)
  - 1 16-h.p. Portable Boiler.
  - 1 each C and E Drill with tripod (Ingersoll-Rand).
  - 1 15-h.p. motor (Wagner) 220 volts, 2 faze.
  - 1 Rotary Pump, 4x3, belt-driven.
  - 1 set Cement Block, 2-piece hand Patterns.
  - 1 No. 6 Chicago Concrete Mixer.
- All the above is in first-class condition and will be sold together or separately. Address THE SHEBOYGAN LIME WORKS, SHEBOYGAN, WIS.

FOR SALE—One C. O. Bartlett & Snow Co. Direct Heat Rotary Dryer, 36x24, Style "M." Will sell for \$350 f. o. D. Dudley, Ky. Write or wire quick. WINCHESTER GRANITE BRICK CO., Winchester, Ky.

## PLANTS FOR SALE

### FOR SALE! COMPLETE EQUIPMENT

For Cement and Plaster: Sand Drier, Mixer, Hairpicker, Block Machine, Bags, etc. H. E. PARROTT, Receiver for DAYTON FIBER PLASTER CO., Dayton, Ohio.

FOR SALE OR RENT—One Concrete Tile and Brick Plant for sale, rent or lease. All machinery, engine, boiler, etc., in first-class condition. Good location. Trade established. Address SMITHLAND TILE CO., Smithland, Ky.

## CARS & LOCOMOTIVES FOR SALE

### CARS.

156—5 yard 36-inch gauge all steel Peteler 2-way dump cars, built 1910 and '11. Thoroughly overhauled. Practically good as new. The best dump cars we have ever seen. We are putting these cars on the market at bargain prices. Write us for further information. Eight 36-inch gauge double-truck flat cars.

### LOCOMOTIVES.

Eleven—12x16 Porter four-wheel saddle-tank 36-inch gauge locomotives, built 1910 and '11, and used until the end of the season 1911; practically new.

One—11x16 Pittsburg four-wheel saddle tank, 36-inch gauge.

Thirty-five 9x14 Porter four-wheel saddle tanks, 36-inch gauge. Most of these have steel cabs and were built since 1902.

### STEAM SHOVELS.

Three—Marion Model 60 steam shovels, in excellent condition; ready for immediate shipment.

One—Bucyrus Model 65, with Model 70 front and applied. Thoroughly overhauled.

Two—Marion Model G shovels, in first-class condition. Also big lot steam shovel repair parts, and other contractors' equipment.

MINNESOTA EQUIPMENT CO., Hibbing, Minn.

## Diamond Labor Agency

35 South Canal Street  
Chicago, Ill.

Office Phone Franklin 3529  
Residence Phone Garfield 5048

## FREE

We supply direct on receipt of trial order, male help, all nationalities, in any number, for skilled or common labor work; men to board themselves or with employers. Bridge, Concrete Form Carpenters and Helpers, Machinists, Engineers, Firemen, Coal Passers, Etc.

WE DO NOT MISREPRESENT, but always describe to our applicants the nature of work, working conditions and wages exactly as stated by employers giving us their orders—hence no dissatisfaction between any parties at interest.

We get the best class of experienced Woodsmen, Trackmen, Quarrymen, Steam Shovel Skinners, Farm Hands, Coal Miners, Factory Help, Shops, Yards, Railroad and Contract Laborers.

We do not charge employers for men or services, they are both FREE.

## BUSINESS OPPORTUNITIES

### AGRICULTURAL LIME AND CRUSHED STONE

#### QUARRY FOR SALE.

A well-developed lime and crushed stone quarry in Eastern Tennessee, situated on the Southern Railway, of approximately 43 acres, is now offered for sale at a very attractive price on reasonable terms. A big market exists in the territory for agricultural lime. Modern road building is now going rapidly forward, which will make a good outlet for that product. Full information and details obtained by referring to file 47833 and writing M. V. Richards, Land and Industrial Agent, Room 371 Southern Railway, Washington, D. C.

## FOR SALE

- 1—60'x6' Lime Kiln.
- 1—125'x8' Lime Kiln.
- 1—1100' Lidgerwood Cableway, complete.
- 1—Thew Steam Shovel No. 6, 3 yd., revolving.
- 1—American Hammer Mill.
- 4—Gyratory Crushers, No. 3 "D," No. 4 "D," No. 5 "K," No. 7 1/2 "K."
- 1—3 ton Road Roller.
- 1—Sand and Gravel Screening Outfit, complete; made by Stephens-Adamson Co.; brand new.
- 2—5'x17' Schmidt Tube Mills.
- 1—1 yd. Clam Shell Bucket.
- 1—D. D. Hoisting Engine.

**WILLIS SHAW MCHY CO.**  
New York Life Bldg. CHICAGO, ILL.

HIGH GRADE SILICA  
**CLAY AND SAND**  
CRUDE-DRIED-GROUND CRUDE-DRIED-SCREENED  
**GEO. C. CROSSLEY**  
CROSSLEY STATION - TOMS RIVER, N. J.

Paper Bags  
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Advertising copy for issue of the 7th should be mailed us not later than the 25th of the month preceding. Changes of copy for the 22nd issue should be mailed not later than the 10th of each month. In complying with this request you will permit of ample time in which to have your ad set and receive proof for O. K., or corrections.

**The Francis Publishing Company - 537 So. Dearborn St., Chicago, Ill.**

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS

# How to Handle the Farmer

By FREDERICK D. CURTISS

## Philosopher Studies Measures of Anti-Trust Bill

Farmer Jones Finds Building Material Dealer Pondering Over Provisions of Clayton Document Now Before Congress—Its Probable Effect on Manufacturers and Retailers.

The Philosopher plainly had a problem on his mind that did not suggest a ready solution. When Farmer Jones entered the office he was met with the usual cheery hail, but the building material dealer seemed preoccupied and Jones asked the cause.

"Just trying to figure out where the administration's anti-trust plan is going to put the building materials trade," was the reply. "The statements given out in Washington listen all right, but when one comes to study the Clayton bill some other angles are presented and their meaning is not altogether clear.

"This measure, for instance, provides that any concern engaged in interstate commerce which shall discriminate in price between different persons or different localities, except on account of differences in grade, quality or quantity of goods sold or differences in cost of transportation, 'with the purpose or intent to thereby destroy or wrongfully injure the business of a competitor,' shall be liable to fine and imprisonment.

"Now, the people who drafted that bill apparently had in mind the cut-throat methods that have been used by trusts to drive out competitors. Everyone will admit that this is good policy, but one is led to wonder if the effect will not be even greater.

"Suppose a certain manufacturer of building materials, no matter what kind, wants to introduce his goods in this locality. He asks me to push his line to the exclusion of other brands, and as a consideration offers me certain inducements in prices and other ways—much better terms than he gives in places where his goods already are recognized by the trade. Of course, I agree to give up a certain amount of time to pushing his line, primarily to get rid of the stock I purchase from him, but incidentally he reaps a benefit. That doesn't figure on the bills, however, and will he be breaking the law?

"Or, take another instance, and something that happens frequently in any line of business. A manufacturer has warehouses in New York, Chicago and Omaha. He realizes that his Chicago house is overstocked, for the demand there has not been up to his expectations, owing to a strike or something else which he could not foresee. He needs the money tied up in the stock, and furthermore the storage charge is running the cost of that stock beyond all reason. He must move his goods or lose a tidy sum, perhaps enough to embarrass him seriously or cause a failure. The natural way is to put a price on the Chicago stock that will move it at once. Under the new bill will he be compelled to cut prices in New York and Omaha to keep from going to jail? If he has to cut prices elsewhere because the Chicago market is off you can see where it will land him.

"I am interested in this manufacturer, because it is a good thing for me to have him keep large stocks of certain things where I can buy them and get quick delivery when some contractor comes in here with an order I can't fill from my own house. Then, too, I have always kept an eye open for bargain sales inaugurated when some one finds he is 'long' on some article that I deal in. If the bill becomes a law and by enforcing a uniform price for all, the country practically prevents a manufacturer from having these warehouses in New York, Chicago and Omaha, then I must depend on shipments from factory and so must keep my stock of staples much larger. That costs money, as you know, and even then my guess as to the demand for a certain article may be too low and by lacking the stuff I will lose an order.

"One of the other business men of the town was telling me his new troubles a few days ago, and it reminded me of a story that I told him.

"A man here who owns several houses which he rents was passing one the other evening and noticed the man of the house eating his supper on a chair in the yard. It had been a cool day, and the landlord stopped to ask the reason for the picnic meal.

"Well, er,—the tenant stammered, 'the er—chimney smokes.'

"That's too bad," said the landlord, 'I'll have it fixed right away. Let's have a look at it.'

"Before the tenant could stop him the landlord entered the door of the house. As he crossed the threshold a broomstick fell upon his shoulders and a woman's voice shrieked:

"Back here again, are you, you old rascal! Clear out with you or I'll—'

"The landlord fled into the yard where the tenant stood, shaking his head in embarrassment. The landlord laid his hand in kindly fashion on the tenant's arm.

"Never mind, Henry," he remarked, consolingly. "My chimney smokes sometimes, too."

"The way business is stirred up these days makes it a wonderful thing if all chimneys don't smoke to some extent. Congress and the state legislatures keep tinkering with the chimneys, but they still smoke at times. Maybe we will get them fixed up one of these days, but I don't like the prospect of eating in the yard.

"The trouble with so many of these new business laws is that you can't tell what they will do by looking at them. Most of them have to go to the Supreme Court before we get their meaning explained, and that wastes time. They make me



"THAT'S ALL RIGHT, HENRY. MY CHIMNEY SMOKES SOMETIMES, TOO."

think of an experience I had the other night. I was standing in front of the postoffice, talking to the postmaster, when we saw a fellow half a block away cutting up some strange antics. Finally I said:

"What's the matter with that fellow who is holding onto the lamp post and shuffling his feet?"

"There was a time," replied the postmaster, "when I'd have said he was drunk, but now he may be practicing some new tango steps."

"The tango may be all right for the young people, but the hesitation waltz is mighty demoralizing to business and most of us have been dancing it so long we have grown tired. What we would like to hear is some old-fashioned 'forward march' music. Some of us are wondering if our cases will be like that of the peddler's old horse. He had just bought the beast from a trader and on the first day the critter dropped dead. The peddler hunted up the trader and poured out his feelings.

"That's queer," said the trader, looking surprised. "He never did that before."

"Most of us have never been on this particular anxious seat before, but that doesn't make it sit any easier.

"And so it goes when the lawmakers begin to legislate against business troubles. One thing we all hope however. When congress gets through with its program this time it ought to quit tinkering with business and give us a chance to find out what we can and can't do and then we will resume operations and try to lay by a few dollars before the next shake-up comes."



"JUST TRYING TO FIGURE OUT WHERE THE ADMINISTRATION'S ANTI-TRUST PLAN IS GOING TO PUT THE BUILDING MATERIAL TRADE."



## We can design Gravel Washing Plant to suit your own Requirements—

Every "S-A" Gravel Washing or Screening Plant is designed to meet special and peculiar conditions—it is designed *primarily* to pay on the investment. We study your market requirements, your probable future demands, your railroad facilities, as well as the character of your gravel, the location of the plant, etc. All these affect the financial success of the plant—and every one of our 250 plants has paid dividends on the investment.

Our Engineers are here  
at your service. Write

**Stephens - Adamson Mfg. Co.**

Conveying Engineers

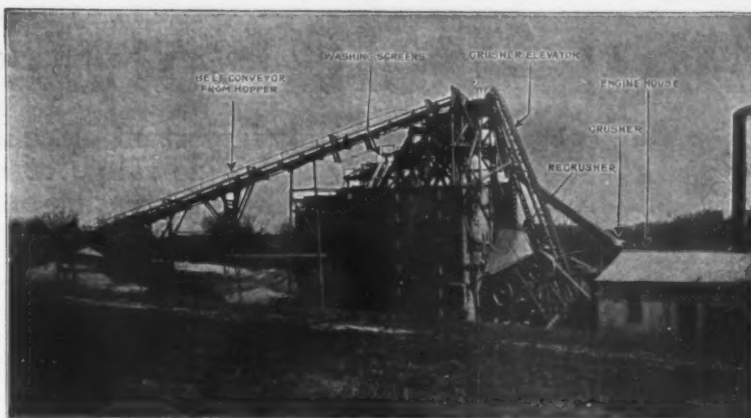
**AURORA, ILLINOIS**

NEW YORK  
BOSTON

CHICAGO  
LOS ANGELES

PITTSBURGH  
SALT LAKE CITY

ST. LOUIS  
TORONTO



The plant, shown above, was designed and built for a market capacity of four cars per day with an allowance for future increases. In one year, the plant had to be increased to handle ten cars daily and all extensions were paid for out of the season's profits. A steam shovel excavates the gravel and delivers into standard gauge cars hauled by a dinky locomotive. The cars dump into a track hopper from which the gravel is carried on the 24-inch by 175-foot inclined belt conveyor to the screens. The product is washed absolutely clean in "S-A" Gilbert Screens and is in great demand.

We design and equip Rock Crushing Plants, Sand and Gravel Washing Plants, Screening Plants, Storage Systems.

We manufacture Conveyors, Elevators, Transmission Equipment, Gates, Feeders, Car Pullers, etc.

## Saginaw System Sand Lime Brick Plants

Contain the least machinery.  
Are cheaper in first cost and in upkeep.  
Produce the most and the best brick.  
Require the least labor.  
Are uniformly successful.

We give to each plant and each purchaser the benefit of our twelve years continuous and successful experience as manufacturers of sand-lime brick and as equippers of plants in all sections of the country.

**JACKSON & CHURCH CO.**

We own and operate five sand-lime brick factories, one of them since 1902.

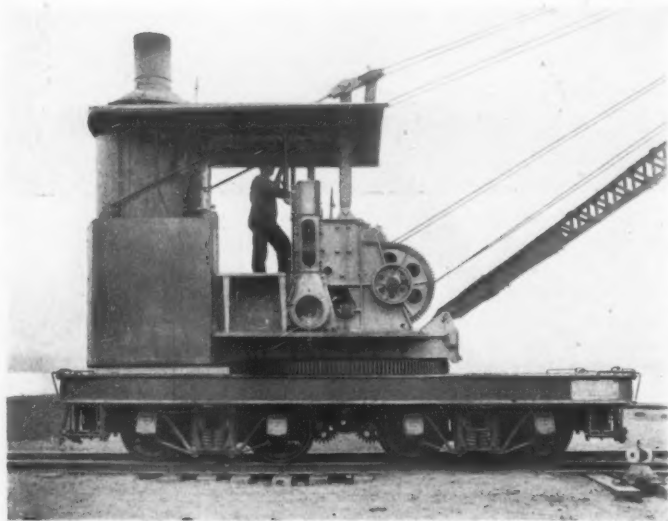
**SAGINAW, MICHIGAN**

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS



# Link-Belt Locomotive Cranes

occupy today a highly important place in the art of handling materials. Their adaptability to a wide range of service and conditions find for them increasing applications.



Beginning almost fifteen years ago with the manufacture of some very large radius heavy duty cranes for our coal storage work, we entered the standard gauge field by applying the experience gained in the manufacture and operation of these large machines and supplementing it by a study of the best features of other makes. Our standard gauge crane reflects therefore, the strength and stability of the heavy duty models with the flexibility and ease of handling of the lightest industrial types.

The Link-Belt standard crane is an all-around machine—it may be operated by steam or electricity, and equipped to handle all modern attachments, including Grab Bucket, Hook Block, Electric Lifting Magnet, Drag Scraper Bucket, Steam Shovel Dipper and Pile Driver Hammer and leads.

*For handling sand, stone, gravel, etc., the Link-Belt Crane is a most profitable investment. Write for facts and figures.*

New York.....299 Broadway  
Boston.....49 Federal Street  
Pittsburgh.....1501-3 Park Bldg.  
St. Louis.....Central National Bank Bldg.  
Buffalo.....698 Ellicott Square

**Link-Belt Company**  
PHILADELPHIA CHICAGO INDIANAPOLIS  
Los Angeles.....204 N. Los Angeles St. :: Minneapolis.....Link-Belt Supply Co.

Birmingham.....General Machinery Co.  
Seattle.....512½ First Avenue S.  
Denver.....Lindrooth, Shubart & Co.  
San Francisco.....N. D. Phelps, Sheldon Bldg.  
New Orleans.....Whitney Supply Co.



**PLYMOUTH  
CLAY  
PRODUCTS  
CO.**

**FORT DODGE, IOWA**

**INDIANAPOLIS CABLE EXCAVATOR CO.**  
Beauty Avenue and New York Street Indianapolis, Indiana  
**NEGLEY PATENTED EXCAVATORS**  
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Agents for Arizona, California and Nevada  
**CHAS. T. TOPPING MACHINERY COMPANY**  
Agents for Western Penna. and W. Va. Bessemer Bldg., Pittsburgh, Penna.

**WELLER-MADE**

Weller Equipment is giving thorough satisfaction for handling rock, stone, cement, lime and other heavy material. Weller "Barres" goes hand in hand with Weller quality. For your Elevating, Conveying and Power Transmission problems you need Weller Machinery. Our 320-page catalog fully describes the complete line of Weller Machinery, and is gladly sent on request. Write for it.  
NEW YORK OFFICE: 30 C uth St. **WELLER MFG. CO., Chicago** ST. LOUIS, MO.: 329 Victoria Bldg.

**The Evans Clay Mfg. Co.**  
UHRICHVILLE, OHIO

Standard Sewer Pipe  
Double Strength Pipe Wall Coping  
Chimney Tops Building Blocks  
Flue Linings Stove Pipe  
Thimbles Fire Brick  
Drain Tile

AND OTHER FIRECLAY PRODUCTS

TWO BIG PLANTS :: 4,500 CARS ANNUAL CAPACITY

**"THE PRODUCT OF EXPERIENCE"**  
**"MASTER"**  
The Reason Why—  
Oxy-Acetylene Welding and Cutting Apparatus should be a part of your quarry equipment.  
BECAUSE: You save 75% welding your broken machinery parts. AVOID long, uncertain and expensive SHUT-DOWNS—AND because "MASTER" Apparatus is designed and made by men of practical experience AND SOLD at PRICE within Reason. Write for bulletin.  
**Engineering Sales Corporation, Railway Exchange Bldg., Chicago**

Write us for prices on "BEAR CREEK" brand White Lime and "WHITE BEAR" Hydrated Lime. Prompt Shipment.  
**HANNIBAL LIME CO.** HANNIBAL MO.

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PLEASE RENDER ALL BILLS IN TRIPlicate

ORDER NO. 2309

REFER TO OUR ORDER NUMBER IN CORRESPONDENCE AND IN RENDERING INVOICES

**PARROTT & CO.**  
CONTRACTORS EQUIPMENT DEPT.  
320 CALIFORNIA ST.  
SAN FRANCISCO, CAL. 6/4/14

Messrs. Ceresit Waterproofing Co., Chicago, Ill.

SHIP TO Parrott & Co.  
San Francisco, Calif.  
AT C. W. & St. Paul, U. P. and C. P.  
VIA  
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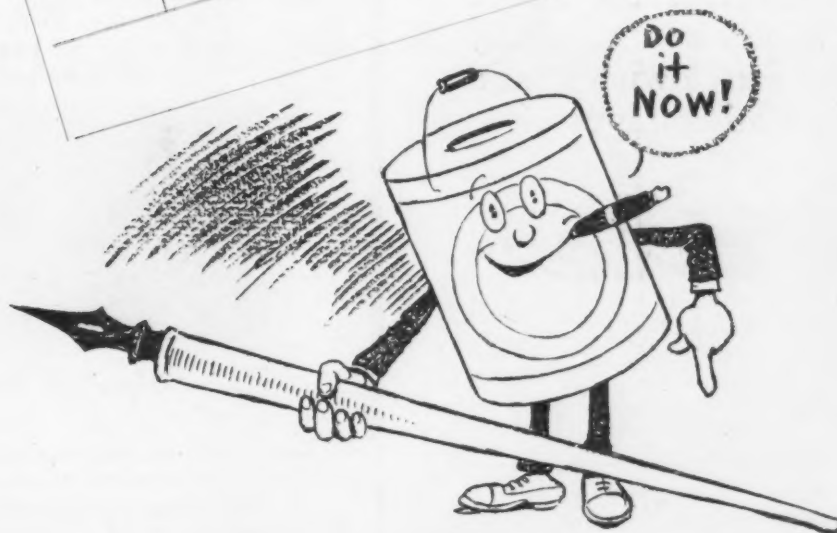
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| ONE (1) | CARLOAD CERESIT WATERPROOFING COMPOUND -- 40,000 LBS. |
|         | 13,300 lbs. to be in FULL BARRELS                     |
|         | 6,700 lbs. to be in 1/2 & 1/4 BARRELS                 |
|         | 13,300 lbs. to be in 10 gallon cans                   |
|         | 6,700 lbs. to be in 5 gallon cans                     |
|         | 40,000 lbs.   |

PARROTT & CO. *W. H. H. H. H.*

# Nuff Sed!

See that carload order?

Know that our 1914 June sales more than doubled our 1913 sales for the same month? Ceresit is growing fast—so are the profits of its dealers.



----- This is a Coupon -----

CERESIT WATERPROOFING CO.,  
924 Westminster Bldg., Chicago.

Gentlemen:

Make me your liberal dealers' offer. Send me your 1914 "Book of Evidence" giving complete facts about Ceresit.

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## Warpless Shingles A Leakless Roof

Warpless because nailed fast at the bottom. Think a minute and you will realize what a wonderful improvement this is. No chance to warp or curl or flap in the wind. Nails are securely covered by the fold of the shingle. Snow water can't back up and leak through.

This turn under fold is a patented feature found only in

### Rex-tile

TRADE MARK  
"The Scientific Shingle"

The thick rounded butt end gives a heavy effect, an artistic texture.



But Rex-tile Shingles are light, heavy roof construction is unnecessary. They are economical, fire-resisting. Very handsome and harmonize with any style of architecture.

Nails go through the turn-under fold thus protecting them from weather. Water cannot leak through or "back up." Rounded butt end gives a thick, heavy, thatched effect.

The colors, soft dull red and blue-black slate, are a part of the shingle—nothing to wash off or crumble—no painting necessary.

Send for samples of Rex-tile Shingles so you can see for yourself. Write today.

FLINTKOTE MANUFACTURING CO.

—you doubtless remember the above advertisement. It shows how carefully we have explained to owners and builders the practical advantages of

### Rex-tile

TRADE MARK  
"The Scientific Shingle"

You have read our advertising and know the unique features which make Rex-tile the best selling shingle on the market.

But there are two points which cannot be emphasized too strongly:

The color, which is an integral part of the shingle itself and so cannot wear off or streak.

The patented and exclusive feature of the turn-under fold, which absolutely prevents the hundred and one troubles experienced with ordinary shingles.

As a matter of profit to yourself, write for samples of Rex-tile Shingles and our special proposition to dealers.

**FLINTKOTE MANUFACTURING CO.**  
91 Pearl St., BOSTON 658 Peoples Gas Bldg., CHICAGO

Manufacturers of the Famous Rex Flintkote Roofing for Factories, Warehouses, Farm Buildings, etc.

Also manufacturers of Paradux—a waterproof canvas covering for all surfaces on which walking will be done—such as sleeping porches, piazza roofs, roof gardens, balcony roofs, boat decks, etc. Easier to lay than tin or metal—far more durable—requires no special preparation of the surface to be covered. Can be painted any color desired.

## DEALERS PROFIT SHARING LINE



ALEXANDER MCCLURE SCHOOL, Philadelphia, Pa. Manufactured with SALT GLAZED BRICK, Shade 104  
J. H. Cook, Architect, Philadelphia, Pa. Manufactured by The H. V. F. C. Co., Nelsonville, Ohio

### Salt Glazed Brick vs. Other Facing Materials.

By using **Salt Glazed Brick** instead of enamel brick, 50% of the cost is saved, a better wall is obtained and one that will not peel off or chip at the slightest rap as does enamel brick. Easier to clean, looks nicer, more permanent.

**Salt Glazed Brick** is known to be the best facing material on the market, besides being the least expensive for a handsome looking wall.



"Athena" Salt Glazed Brick

We have the best clay for salt glazing.  
We employ the best equipment in manufacturing.  
We use greater skill in preparation of the clay, drying and burning.  
We understand thoroughly the art of salt glazing.  
We are progressive and follow progressive methods.

*DEALERS—Write Us For Our  
Special Proposition, Also For Our  
Large Illustrated Catalog.*

**The Hocking Valley Fire Clay Co.**  
NELSONVILLE, OHIO

Tell 'em you saw it in ROCK PRODUCTS AND BUILDING MATERIALS





## SUPPLY MEN'S FORUM

### Delivery Experiences Wanted.

Charles Weiler Desires to Compare Motor Truck Figures With Builders' Supply Men.

Milwaukee, Wis., June 23, 1914.

Editor, ROCK PRODUCTS AND BUILDING MATERIALS:

I would like to compare experiences with others on the problem of haulage. I note that the use of auto trucks has reached a point where we are all being competitively forced into it whether we find trucks economical or not, and I would like to ask, through ROCK PRODUCTS AND BUILDING MATERIALS, if any brother in the trade has definite comparative cost—figures as between trucks and drays.

Of course conditions vary greatly, as some cities are tied down to slow service on account of congested streets, or to small loads on account of heavy grades, but enough are practically alike to make comparisons interesting. To get at a delivery cost of cement, I put one truck at hauling cement exclusively for a year, 80 bags to the load. It was a specially built Packard—cost about \$3,800 complete, ran 13,800 miles the first year, wore out two sets of block tires, and being new naturally gave us little trouble, but its cost was based upon a somewhat arbitrary per diem table as an average spread over the truck's life, as follows:

|                                |        |
|--------------------------------|--------|
| Depreciation, 15 per cent..... | \$1.60 |
| Interest, 5 per cent.....      | .50    |
| Repairs and repainting.....    | 2.00   |
| Insurance.....                 | .30    |
| Tire replacement.....          | 2.40   |
| Lubricating.....               | .20    |

Total.....\$7.00

Adding wages of chauffeur at \$3.00 and helper at \$2.00, with gasoline for the year amounting to \$455, made the average daily cost a little over \$13; on this basis the average cost of delivering cement around this city was 10 1/4 cents per barrel of four bags.

Now on the basis of hiring a dray, pair of heavy horses and a driver for \$5.00 per day, or allowing that per diem for our own outfits, the cost rarely exceeded 7 1/2 cents per barrel.

"On the face of the returns," drays are so much cheaper than trucks that for one I am a little sick of the truck problem, but the truck has so much advantage in quick deliveries, to which the demand has become accustomed, and the ability to concentrate yards and save in that direction, that the discrepancy in cost may be more apparent than real.

It seems to me that the point involved is the table of fixed charges at \$7.00 per day; of course the first year of the truck does not cost nearly as much. I would like to bring this table to the attention of cement truck owners and ask their experience and criticism.

I would be very glad to hear from them through ROCK PRODUCTS AND BUILDING MATERIALS, or will be pleased to receive and answer all letters on the subject.

Yours very truly,

CHARLES WEILER, Treasurer,  
Western Lime & Cement Co.

### Terre Haute Supply Men Busy.

Terre Haute, July 3.—The sand and gravel men of Terre Haute, in fact the producers along the Wabash river everywhere, are having a prosperous season. Prices, however, are not very satisfactory as demand recently is for washed and screened sand and gravel, while formerly bank run sand and gravel was used extensively. A great era of road building now in progress. Reinforced concrete roads and

streets are being built in many towns and townships in Illinois and Indiana.

The Wabash Sand & Gravel Co., of this city, report that their business for this time of the year is greater than it ever has been at this time in past years and they look forward to good business in the fall. Times, generally, in this section of the country are good and there has been no depression in construction work.

### McLaughlin to Expose Grafters.

Slaying of Union Business Agent Causes Chicago Material Men and Contractors to Tell of Alleged Blackmailing Schemes.

Builders and building material men of Chicago have been very much interested in the past two



JOHN J. McLAUGHLIN, CHICAGO BUILDING MATERIAL DEALER WHO IS EXPOSING UNION GRAFTERS.

weeks in the investigation conducted by Assistant District Attorney Albert L. Hopkins into the charges made by John J. McLaughlin, president of the McLaughlin Building Material Co. and a member of the Illinois legislature, that a system of blackmail has been conducted by labor leaders in the building material field. Following the death of George Hammond, business agent for the Excavators, Graders and Asphalt Teamsters Union, McLaughlin, who claims that Hammond was killed while attempting to blackmail Patrick Dignan, a contractor, by demanding "protection money," decided that, if possible, he would put a stop to the frequent demands for money by business agents on threats of calling on employees to strike.

Hammond is supposed to have demanded a certain amount of money from Dignan. He did not get it, and as he drove off after the quarrel he is said to have hurled a threat at Dignan. Realizing full well what it meant, and in order that there would be no chance for further holdups, Dignan shot Hammond, killing him instantly.

As soon as a report of the killing reached Mr. McLaughlin's ears he realized full well what had taken place. His first statement was: "I have never been a policeman before in my life. I never have cried for help, however hard they packed it

onto me, but, by God, I'm through. Ordinary hold-ups are bad enough, but this murderous gang has brought things to such a pass that every industry in the city is hurt."

Gathering together all available data, McLaughlin was closeted the next day with District Attorney Wilkerson, who in turn placed inquiry into this matter in the hands of Assistant District Attorney Hopkins. Repeated conferences have been held and a special grand jury will on July 13 investigate the charges made by McLaughlin. In addition to the information furnished by Mr. McLaughlin, a number of manufacturers of other cities have gotten in touch with federal officials and informed them that they have been subjected to paying "protection money" to labor officials of Chicago. It is because of the interstate traffic in building materials entering Chicago that the interest of federal authorities has been secured.

Threats against the life of Mr. McLaughlin were made the day after it was learned he had consulted the authorities relative to exposing conditions among business agents of the building material workers. It is expected that more sensational charges will be made when the Federal Grand Jury meets next week. Other material men and several contractors are expected to testify.

### Parsons Secures Motor Truck.

Quick Delivery Rather than Economy Prompts Investment.

The Parsons Lumber Co., of Rockford, Ill., has just added to its efficient delivery system a "Jeffery" two-ton Quad Truck, which, according to Mr. N. H. Parsons, "drives on all four wheels, steers on all four wheels and has a brake on all four wheels." It is surely an ideal four-wheel drive and it is used exclusively for the purpose of delivering cement, as cement users in Rockford have formed the same habit that they have adopted in other cities—waiting until the last minute for their material.

Commenting on the purchase of the new truck and its possibilities, Mr. Parsons says: "We feel this truck is going to help us materially in making prompt deliveries. We are using it principally in cement work, as it is customary with our cement users in Rockford, as we presume it is in other cities, to wait until they are all ready for cement and have from five to 25 men standing ready to use it to call up and ask for its delivery in less than an hour; and it has always been our policy to make deliveries as promptly as possible. We do not anticipate that this method of handling business is going to pay any considerable amount under the cost of delivery by horses and wagon, but will enable us to satisfy our trade by reaching the outskirts of the city, where considerable building is now being done, without the delays necessary when we are depending entirely upon horses in hot weather."

The hesitation in business felt in other places is also felt in Rockford, according to Mr. Parsons, but there is more or less residence building going on. A few municipal improvements in the way of paving and sewer work is under way, and as this puts more or less money into circulation, the dealers are not suffering as they would if the municipal improvements were also curtailed. A few semi-public buildings are being constructed.

### NON-FADING MORTAR COLORS.

The essential of quality in mortar colors is interestingly pointed out in literature issued by the Jamestown Paint & Varnish Co., of Jamestown, Pa. It is stated that there is a greater difference in the quality of mortar colors than in any other material entering into the construction of a brick building. With the wonderful progress which has taken place in the face brick industry during the past five or ten years, the demand for high-quality mortar color has developed.



# N. B. S. A.

## Co-operation Among Dealers Essential

Associations Become Melting Pots and Through Refining Process Bright Ideas Are Evolved.

The building supply man or, in fact, the dealer in any line is always on the alert for something that will have a tendency to stimulate his trade, and probably the most effective manner he finds of doing this at the present time is through the advertising of his wares and the service that is accorded with them.

Now, speaking of advertising, may we not compare the same with organization work and show wherein that co-operation which results from effective organizations is practically the same identical thing.

Scientific co-operation is evident today in practically every modern business. By this is not meant the banding together of individuals or corporations for the purpose of transgressing the laws of the country, but rather the actual putting into effect of the time-worn laws of interdependence. The actual results which have been accomplished and are being recorded each day, prove conclusively that co-operation is considerably greater than competition, and those industries who have perfected the spirit to the highest extent are accordingly the most prosperous and influential.

In the building supply business there are many problems confronting the dealer in his relations with the manufacturer that cannot be handled satisfactorily by the individuals, but with the united effort of all the proper solution could soon be found. Therefore, why shouldn't the building supply man also co-operate with his competitor and advertise himself through the noise that would necessarily be made from the voices of many, and which would not be forthcoming from him as an individual. He would soon be looked upon as a "live one," and the many obstacles that now loom before him each day would be made easy of surmounting and perhaps eventually eliminated.

Organizations are founded for the purpose of getting the people together, securing from the individuals the best that there is in them, and in turn distributing the combined results to all; in other words, they are a melting pot for the ideas of many, a place where a man in trouble can relate his difficulties to some one who is in the same line of business and who will understand him and be of assistance.

There are many such organizations throughout the country formed for the purpose of bringing the building supply business to a higher plane than that on which it now rests, and they are not appealing to the dealer from any sentimental standpoint, but rather from a materialistic view, and it is gratifying to

find that the dealers each day seem to be showing a greater appreciation of their work and are endeavoring through the assistance which they can yield by joining the ranks to help the good cause along.

### N. B. S. A. Notes.

Since the last issue of ROCK PRODUCTS AND BUILDING MATERIALS, applications have been received from the following:

Akron Gypsum Products Co., Buffalo, N. Y.  
Belden Brick Co., Canton, O.  
Evanston Building Material Co., Evanston, Ill.  
General Builders' Supply Co., Ft. Worth, Tex.  
Ottumwa Lime & Cement Co., Ottumwa, Ia.  
Wisconsin Brick Co., Madison, Wis.

President Cormack was one of the party of members of the Chicago Chamber of Commerce who last week made a tour of the northern part of Illinois in the interest of good fellowship and co-operation between the various civic bodies. The trip was made in automobiles, and all hands reported a very satisfactory time. The members were stronger than ever for good roads upon their return.

### O. B. S. A. to Meet at Cedar Point.

According to R. E. Do Ville, president of the Ohio Builders' Supply Association, the Executive Committee of that organization will meet at Columbus on July 9 for the purpose of deciding the dates of the midsummer meeting. This meeting will be held, as usual, at Breakers' Hotel, Cedar Point. It is most likely that Friday and Saturday, August 7 and 8, will be chosen as meeting days.

### GRAND RAPIDS HAS NEW SUPPLY CONCERN.

Grand Rapids, Mich., July 6.—The Michigan Face Brick Co. is the name of a new concern which was organized in this city last week. The company will handle building material. It is capitalized at \$10,000 and is officered as follows: President, Frank W. Butterworth; vice president, Joseph W. Moulding; secretary-treasurer-manager, George T. Kruer. The company will handle here the products of the Western Brick & Hollow Tile Co., of Danville, Ill.; the Yingling-Martin Brick Co., of Pittsburgh, and the

Thomas Moulding Co., of Chicago. The company's local office is No. 306 in the Association of Commerce building.

### Real Home-Town Booster.

Chattanooga, Tenn., June 20.—Nothing but Chattanooga products are going into the two-story residence now being built at Vine and Fort Wood streets by O. L. Bunn, secretary of the Chattanooga Manufacturers' Association. Chattanooga workmen only are working on the job, and W. H. Sears, the architect, is also a Chattanooga product.

The house is to be faced in the rough brick of which the Key James Brick Co. makes a specialty. The Chattanooga Tile Co. is laying the hearths and the tile flooring, while the woodwork is being done by the Lookout Planing Mills. The Cahill Iron Works has supplied the iron materials and the Casey-Hedges Co. is furnishing the plumbing requisites. The contract for the electrical wiring and fixtures has gone to the Terrell-Hedges Electrical Co., while the Mountain City Stove & Manufacturing Co. is supplying the roof materials.

### Takes Over Assets of Retiring Firm.

Stocks and Agencies of Jenkins & Reynolds Co. Purchased by Meacham & Wright Brick Co.

The Meacham & Wright Brick Co., 139 North Clark street, has purchased all of the merchantable stock and assets of the Jenkins & Reynolds Co., who until May 1 had offices in the Chamber of Commerce building. On that date the Jenkins & Reynolds Co. retired from business.

In commenting on the deal, J. D. Blount, of the Meacham & Wright Brick Co., says: "The dike practically amounts to a purchase of their entire assets. We did not take over their liabilities, however, or accounts receivable, the sale being purely the purchase of all brick the Jenkins & Reynolds people had on hand, the taking over of several of their agencies and uncompleted contracts, with the idea of making a very excellent and complete line of facing brick to be carried by Meacham & Wright Brick Co. We also took over two of their salesmen, namely, Messrs. Charles Foley and R. B. Howard."

A new corporation has been formed at Toledo, Ohio, to be known as the Toledo Flexistone Co., with a capitalization of \$50,000. The concern will manufacture and sell a new formula of building cement such as is used in walls and for other purposes. Plans are said to be indefinite but a large manufacturing plant may be established at Toledo.

#### NATIONAL BUILDERS' SUPPLY ASSOCIATION.

Chamber of Commerce Bldg.

Chicago, Ill.

#### Application for Membership.

The undersigned being heartily in accord with the principles and aims of the National Builders' Supply Association does hereby apply for membership:

Firm name.....

Signed by.....

P. O. Address.....

Date.....

#### Officers.

President—Edw. K. Cormack, Chicago.  
Treasurer—John J. Voelkel, New Orleans.  
Secretary—L. F. Desmond, Chicago.

#### Directors.

J. H. Allen, Lincoln, Neb.  
Charles Warner, Wilmington, Del.  
C. N. Bay, Detroit, Mich.  
W. F. Jahneke, New Orleans, La.  
C. M. Kelly, Providence, R. I.  
W. W. Coney, Cincinnati, O.  
L. W. Macatee, Houston, Texas.  
D. J. Kennedy, Pittsburgh, Pa.

# CEMENT

## Instructive Summer Outing

**Great Marquette Cement Mill, La Salle County, Ill., Visited by a Party of the Captains of Industry, Consisting of Men of World-Wide Prominence in Business.**

Subjectively Portland cement is the most interesting product of modern industries to those who know the most of and about it, because of its wonderful growth in importance as a commercial commodity, its firm and constant value as the first and final indestructible material and its present and future influence upon civilization. The real knowledge of Portland cement as to the methods of its production has been naturally confined to but comparatively few men, for the reason that it is a technical proposition involving the assemblage of large tonnages of natural products of the earth consisting of lime, alumina, silica, coal and a few other less important elements, by such means as will be more economical for the manufacturing process of grinding, burning and regrinding into the finished product. In this, as in many other directions, one's interest grows in the subject in the same proportion as the knowledge drawn from observation and study increases. The masters of modern business have learned to enjoy the study of the technique of the world's most important activities as a part of the principle of progress and expansion which is the guiding star of our system.

The following gentlemen, as guests of the Marquette Cement Manufacturing Co., gathered at the Rock Island railroad terminal in Chicago on the morning of June 25th to join in "an outing and voyage of discovery" through the Illinois valley to La Salle county, including visits to the great cement mill, with its many unique features, to the picturesque Deer Park estate of F. W. Matthiessen, of La Salle, and to historic Starved Rock:

W. T. Bruckner, vice president, Continental & Commercial National Bank, Chicago.  
 F. B. Bowes, vice president, Illinois Central R. R. Co., Chicago.  
 Capt. George P. Blow, La Salle, Illinois.  
 Benjamin Carpenter, George B. Carpenter & Co., 436 Wells St., Chicago.  
 L. A. Carton, treasurer, Swift & Co., Union Stock Yards, Chicago.  
 F. C. Caldwell, president, H. W. Caldwell & Son Co., Chicago.  
 Dr. Frank W. DeWolf, director, State Geological Survey, Urbana, Ill.  
 V. J. Duncan, Ottawa, Illinois.  
 N. W. Duncan, La Salle, Illinois.  
 Stuart Duncan, La Salle, Illinois.  
 F. P. Eyman, assistant freight traffic manager, C. & N. W. Ry. Co., Chicago.  
 James B. Forgan, president, First National Bank, 38 S. Dearborn St., Chicago.  
 Norman D. Fraser, president, Chicago Portland Cement Co., 30 N. La Salle St., Chicago.  
 Robt. H. Green, president, Streator Clay Mfg. Co., Streator, Illinois.  
 John M. Glenn, secretary, Illinois Manufacturers' Association, 76 W. Monroe St., Chicago.  
 Robert B. Gregory.  
 H. S. Hazen, La Salle County Carbon Coal Co., La Salle, Illinois.  
 H. G. Herget, president, Illinois Manufacturers' Association, Pekin, Illinois.  
 Charles E. Hook.  
 W. F. Hypes.  
 Fred K. Irvine, editor, ROCK PRODUCTS AND BUILDING MATERIALS, Chicago.  
 Judge Marcus Kavanagh, 5 N. La Salle St., Chicago.  
 C. E. Kremer, attorney, Insurance Exchange Bldg., Chicago.  
 E. S. Keeley, first vice president, C. M. & St. P. Ry. Co., Chicago.  
 Mr. Lortz, Fulton Iron Works, St. Louis, Mo.

F. B. Montgomery, International Harvester Co., 606 S. Michigan Avenue, Chicago.  
 C. M. Moderwell, Moderwell Coal Co., 322 S. Michigan Ave., Chicago.  
 F. W. Matthiessen, La Salle, Illinois.  
 F. X. Mudd, general manager, Live Poultry Transportation Co., 343 S. Dearborn St., Chicago.  
 Joy Morton, Morton Salt Co., Railway Exchange building, Chicago.  
 Sterling Morton, Morton Salt Co., Chicago.



A BATTERY OF FAMILIAR FACES LONG IDENTIFIED WITH THE GREAT INDUSTRIAL DEVELOPMENT OF THE MIDDLE WEST.

George E. Marshall, Marshall-Jackson Co., Chicago, Ill.  
 LaVerne W. Noyes, president, Aermotor Co.  
 Thomas F. Noon, Peru, Illinois.  
 Charles Piez, president, Link-Belt Co., 39th and Stewart Ave., Chicago.  
 C. A. Plamondon, president, A. Plamondon Mfg. Co.  
 Charles S. Reed, president, Chicago Retort & Fire Brick Co., Ottawa, Illinois.  
 O. C. Simonds, Graceland Cemetery Co., Buena Station, Chicago.  
 Dr. Timothy Stone, Pastor Fourth Presbyterian Church, Chicago.  
 Homer A. Stillwell, Butler Brothers, Randolph Bridge, Chicago.  
 Edward F. Swift, Swift & Co., Union Stock Yards, Chicago.  
 C. E. Spens, assistant traffic manager, C. B. & Q. R. R., Chicago, Ill.  
 H. M. Scott, sales manager, Lehigh Portland Cement Co., Chicago, Ill.  
 Robert W. Thompson, executive secretary, Commercial Association, La Salle, Illinois.  
 Nelson Thomasson, 117 N. Dearborn St., Chicago.  
 Paul Willis, president, Kenwood Bridge Co., First National Bank building, Chicago.  
 H. Woodland, treasurer, Allis-Chalmers Mfg. Co.,



INTERIOR OF POWER PLANT, MARQUETTE CEMENT MANUFACTURING CO.

Milwaukee, Wisconsin.

Fritz Worm, president, German-American Portland Cement Co., La Salle, Illinois.

L. G. Yoe, Highland Park, Ill.

W. G. Zoller, vice president, Bell & Zoller Coal Co., 343 S. Dearborn St., Chicago.

A special train of Pullmans was made up and the very enjoyable and instructive trip was personally conducted by Wm. Dickinson, vice president of the Marquette company, which, being said of itself, constitutes plenty of description to many of our readers who know him well; for to him was due all of the perfect service in the dining car constantly in commission, the completeness of each and every detail directed to the comfort of the guests, as well as

the injection of his hearty good fellowship throughout the trip. Mr. Dickinson was ably assisted by the staff of the company in many of the details that required special local attention.

A perfect June day smiled upon that wondrous valley rightly called "nature's treasure house" as the special passed over the "Summit Ridge" which divides the Mississippi watershed from that of the St. Lawrence, through rich fields of ripening grain and waving corn, past factories, mines and mills on either side, without a stop till Ottawa was reached, and a few minutes later the engineer pulled up at La Salle to transfer his charge to the Burlington rails. Here Mr. Matthiessen; Fritz Worm, of the German-American Co.; Henry G. Herget, of Peoria, and perhaps one or two more, joined the party. Mr. Matthiessen proved to be a most entertaining guide to those on the platform of the observation car during the trip up the rugged Vermilion valley from the city of La Salle to the Marquette plant. In pointing out the many coal mines, he observed that the branch of the road being traversed was built originally for coal hauling purposes and had grown into a full-fledged railroad by the growth of the industries along the Vermilion from Streator to La Salle. On the bluffs across the river he pointed out one of the boundaries of his own Deer Park estate, in the improvement of which he has taken so much interest and pride; also the big quarries and mills of the Chicago Portland Cement Co., of which Norman D. Frazier is president.

About the time the special pulled into the Marquette properties there was a brisk shower of rain which, Mr. Dickinson declared, was not a part of the program—but of course none of the visitors would believe any such thing, for all of them were convinced by this time that even the elements would consent to the plans of such a royal entertainer. Indeed, the shower was opportune, for at the very time it came up the visitors were ready to enter the mines from which come all of the rock and shale



as raw materials for making Marquette Portland cement. No more convincing evidence is needed of the fact that weather conditions cannot affect in any way the production of raw materials that are required at the cement mill, for while the shower and the wind stormed outside the party of visitors were being conveyed in a train of mining cars through dry caverns of the limestone mine. Many of the guests remarked about the pleasant temperature always to be enjoyed by the miners, and this of course provoked the observation that practically the same temperature prevailed all winter, so that ideal working conditions surround the miners at all times.

The mines are lighted with electric lights and provided with several miles of tram tracks equipped with electric motive power. A full-sized steam shovel operated by compressed air was seen in operation and a funny old mule, the mascot of the mines, was at work making up the trains of material to be later drawn out by electric power to feed the crushers with an overfeed dump, for the elevation of the mine's opening has been so selected as to do away with the cost of preliminary elevating of raw materials of both kinds. In another gallery a bench of drills with the drill holes about finished and ready for charging with dynamite was seen and explained to the visitors in detail by the superintendent.

Close by an improvised theater had been arranged, and Mr. Duncan with his megaphone invited the visitors to be seated in the opera chairs to listen to the short lecture by Dr. Frank W. De Wolf, of the Illinois Geological Survey, in explanation of the peculiar rock deposits and their conformation in La Salle county. Dr. De Wolf is a geologist who loves his work and he told the legend and explained its economic significance about as follows:

#### Geological Resources of the La Salle Region.

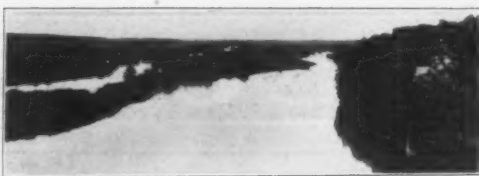
West of Ottawa the railroad cliffs expose to view at the base a massive layer of the lower magnesian dolomitic limestone. Above it may be seen the layer of pure sandstone called the St. Peter. Still higher lie the shales, sandstones, limestones and coals of the carboniferous system. Over all the upland may be seen the boulder clay of glacial origin.

Similarly, west of La Salle one can recognize from railroad cliffs and samples from drilled wells, the same definite arrangement of rock layers, with new beds interlaid.

However, by plotting the observations in a diagram one sees that the layers on the west lie hundreds of feet lower than those on the east. They have been folded up into an arch trending northwest by southeast along a line through "Split Rock" and Deer Park, where dips of 15 to 45 degrees are exposed.

Historically, the formation of the rocks and their elevation are very clearly recorded. The fossil shells of the lower magnesian limestone so closely resemble living forms as to indicate growth and accumulation in water that was clear, shallow and warm, like that where coral reefs accumulate today at a very slow rate.

Evidently the land rivers then brought in great burdens of sand during the thousands of years which witnessed the St. Peter sand deposition. This sand consists of 98 per cent pure quartz; and the grains are so universally well-rounded as to suggest great wind-swept beaches where the angular crystalline form



THE BEAUTIFUL ILLINOIS RIVER, SHOWING HISTORICAL STARVED ROCK TO THE RIGHT.

was worn away. Such conditions existed over an area extending from Minnesota and Wisconsin at least to central Missouri.

Marine conditions then returned and caused the deposit of the rocks which overlie the St. Peter. The most interesting period perhaps was the carboniferous. In the La Salle region the period began with deposition of a bed of coarse sand until the sea bottom and benches were about on a level. Evidently a great swamp of luxuriant vegetation then developed; for in the lowest coal bed may be found fossil tree trunks, fern fronds and other plant tissues. This coal averages three to four feet in thickness, and the only means of judging the time for its accumulation is by comparison with modern swamps like the Great Dismal swamp. It is estimated that such a swamp growth produces 40 tons of deposit per acre each year. But if the deposit is compressed to the density of coal it would require 6,000 to 8,000 years to yield one foot.

Overlying the coal may be seen the shale or soapstone roof, which indicates a hardened mud which swept into the waters of the drowned swamp. The variations of deposition continued frequently, and resulted in miscellaneous alternations of shale, sandstone, coal and limestone. Near the close of the carboniferous period was formed the limestone now utilized at this mine as cement rock, together with the underlying clay-shale.

Over the carboniferous formations occurs the boulder clay, but it lies undisturbed, although the lower strata are arched into the LaSalle anticline or fold. Evidently the folding came after the carboniferous time but before the glacial drift was deposited. A great demonstration of mountain-making occurred in the Appalachians and elsewhere at the same time, and indicates yielding, buckling, and readjustment of the earth's outer layers after an era of universal erosion and removal of billions of tons of land masses to the sea bottom. The occurrence has been graphically, though perhaps incorrectly likened to the drying out of a round, smooth apple, until the skin lies wrinkled on the shrunken fruit.

At a later date, surface weathering and erosion had reduced the LaSalle area to an approximately level plain with only minor valley excavations, when there came a climatic change and with it a slow-creeping mountainous mass of ice and snow from the Hudson Bay region. Judging from existing glaciers in Greenland and elsewhere, such ice sheets move only a few feet or rods each year, and they push along in front and drag beneath themselves the surface soil and the fragments and boulders broken from resistant obstacles. Thus in the LaSalle region and as far south as Williamson county may be seen boulders of granite and Jasper carried from ledges in the Lake Superior region. Another climatic change caused the ice sheet to melt away and left behind the smoothed prairie upland of Illinois.

The latest important change in the LaSalle region began when Lake Michigan's ancestor received the outflow from the front of the melting ice sheet, and finally ran over the southwest rim and began the excavation of a stream course which is now the great Illinois valley at LaSalle.

Industrially, the importance of the region is due

in geological order to (1) the lower magnesian limestone, formerly used for production of natural cement; (2) the St. Peter sandstone as a source of glass sand, and of artesian water; (3) the beds of coal and associated fire clay and shale for clay products; (4) the LaSalle limestone as a basis for the Portland cement industry, in an area of about 14 square miles, the most available deposit of northern Illinois.

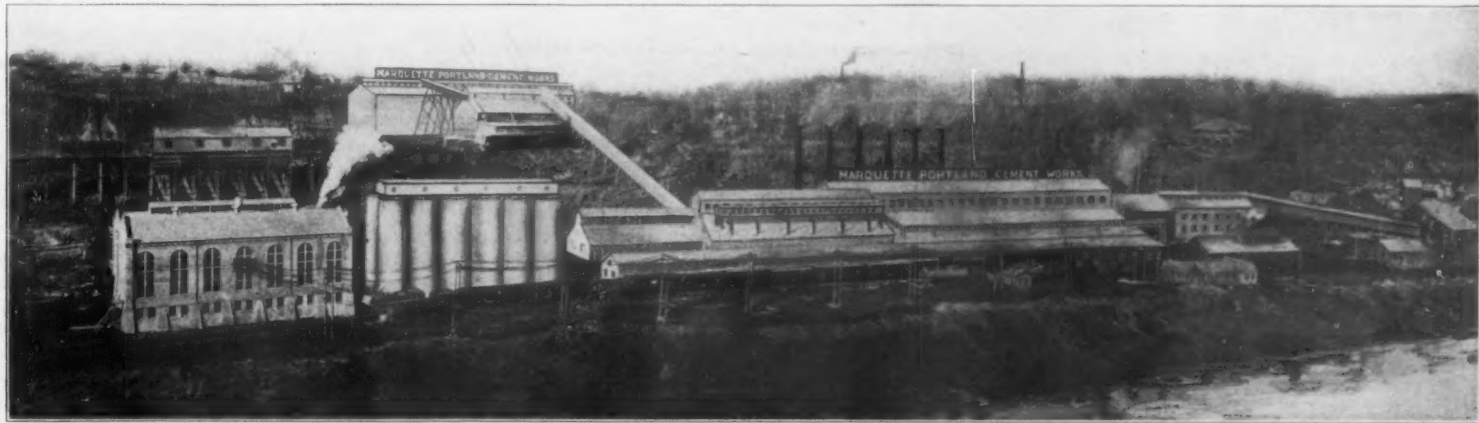
Finally the up-folding of the mineral wealth and the cutting down of the Illinois valley have exposed the resources for economical recovery and utilization, and have attracted early exploration and settlement and the present-day industrial investments.

Never was a lecture in geology so impressively and gorgeously staged. The high vault of the dim roof reflected countless sparkles of life from the electric lamps, miners' hot torches and numerous lantern lights brought by the guides of the visiting party. The massive, rugged columns of rock left by the miners to support the roof made a setting most appropriate. Far away in distant galleries twinkled the lights in the miners' caps and the slight "clink" of their tools above told that they were busily working other galleries similar to those already seen.

To those best acquainted with the essentials for producing a high-grade Portland cement economically, the section of the stereogram of La Salle county exhibiting the exact spot of the location of the mine was most impressive, for it showed the three great indispensables in cement making already assembled for the purpose, as it were. Coal, pure limestone, and silicious shale are in abundance right on the company's properties.

Coming out of the mine, Mr. Dickinson led the party through the big mill, beginning at the raw end where the mammoth crushers break up the rough rock, to the Kent mills groaning out the fine powder, and then to the kiln room where the composition is burned to clinker and on to the finishing mill, where the big tubes grind out the finished product; and all of these processes so regular and at the same time so noisy as to make explanation impossible. Next the party went to the storage and shipping departments, where the Bates automatic bagging machines were passing out the loaded cotton bags of Marquette Portland cement and a bunch of loaders were filling the cars for shipments to the trade. Last of all, the visitors went through the power plant, equipped with Corliss engines and mammoth electric generators. Here at last there was silence except for the whirl of the 48-foot flywheels of many tons' weight and the clicks of the automatic oiling devices.

The plant is laid out in a straight line from the mines to the finishing mill and shipping department, for this has been demonstrated to be the most economical way to handle the vast tonnages of material in a modern cement mill. The principle of gravity has been employed to the limit, in this way eliminating the handling of thousands of tons daily and so saving this big item of cost. The coal supply comes into the plant upon a level above the roof line of the mills in bottom dump cars, so there is no bill for unloading fuel, and putting it right where it is wanted in the plant. This is a valuable



PLANT OF THE MARQUETTE CEMENT MANUFACTURING CO., LA SALLE, ILL.

feature of competent designing that pays dividends in reduced cost every day, for the tonnage of coal used daily is enormous. And there are other features: For instance, all of the acreage of property represented by the mines visited by the party of discoverers is quite as available for farming or other purposes and is so conserved, while the economics of the mining operation as already suggested are available all the year around.

As explained in our geological lecture, the location is uniquely adapted for the purpose of making the best cement in the most economical way, and the Marquette company is exceedingly fortunate in having its up-to-date plant arranged in the most effective and efficient manner to make every machine and every man count for his full quota every day of operation. All of these points and many more were noted and commented upon by those masters of practical industries who made up that very intelligent party of visitors. Colonel Dickinson was justly proud of each detail of the splendid establishment and so received the congratulations of his guests.

Luncheon was served in the waiting dining car and the shower previously mentioned having laid the dust "according to program" the party was invited to cross the river, where they embarked in automobiles, proceeding along the road at the top of the bluffs of the Vermillion river to Deer Park. Here F. W. Matthiessen received the visitors in his sumptuous country residence. While there was plenty of refreshments all the time, it was given to Mr. Matthiessen's hospitality to wave the visitors cordially to his buffet well stocked with stimulating refreshments of every kind. Only a few moments were given to speeches and then the guests took to their autos and were driven through the natural wonders of the beautiful park. Several picnic parties were encountered, for the generous owner is a philanthropist and enjoys his beautiful estate most in the pleasure he can extend to others through it. A fine golf course is one of the new features which is much used by the La Salle Golf Club. Deer Park is a veritable beauty spot naturally and has been improved with landscape gardening and road improvements, not overlooking the abundance of blooming flowers up to the last stage of development.

Again Mr. Duncan's megaphone called the chauffeurs together and a procession of autos "struck the trail" to Starved Rock. With bluffs and dells on either side and a glimpse of the smooth Illinois now and then, the road wound through the broken country with easy grades until the new state park was reached. A pilgrimage was formed to the high plateau which has so much historic association, and probably had something to do with the name of the Marquette company, for it was on this very spot where the remarkable French expedition halted and made terms with the ferocious Illinois in the Seventeenth Century.

From Starved Rock the party went by auto to Ottawa, where the special was waiting at the Rock Island depot and the party embarked for Chicago. Dinner was served en route, and right on time, 7:30, the train pulled into the terminal at La Salle and Van Buren streets.

The trip was named "A day twelve years old," and this, taken out of a full business life, means a very delightful occasion. It was a day devoted primarily to the practical side of making Portland cement, which has given mankind the supreme blessing of safety from the fire risk and danger, which makes possible permanent roads and many other improvements that, without this wonderful product have always been transitory and unsatisfactory. It has entered modern life in such a way as to be an inseparable part of future progress, for as yet we have only felt the dawn of its influence for blessing the human family. So deep rooted is this that it reaches to the eternal beginning of things and finds its place in the brief list of indispensables.

The California Portland Cement Co., of Colton, Cal., has increased its capital stock from \$500,000 to \$1,000,000.

# CONCRETE

## A Fireproof Wholesale Grocery Establishment

Culminating the dream of his life, R. A. Bartley, veteran Toledo (Ohio) wholesale grocer, is established in his magnificent new building, a plant that represents a financial outlay of \$250,000. The new Bartley building is a seven-story and basement structure, 120 feet by 140 feet, of reinforced concrete of a flat slab type of construction, with brick veneer and terra cotta trimmings, is fireproof throughout and a model of its kind. The floors are of cement, and a composition roof is laid on a concrete roof slab, while the elevator and stair towers are enclosed in concrete. The windows have steel sash, rolling steel shutters are on all entrances, and canopy over railroad siding is of cement tile. On account of the fireproof construction Mr. Bartley will save \$2,000 a year in insurance.

Including unloading platforms, the building has a



THE R. A. BARTLEY WHOLESALE GROCERY BUILDING AT TOLEDO, OHIO.

total of 156,000 square feet of floor space. One of the important features is a match vault wherein may be stored two carloads of matches, and if the contents of the vault were to catch fire it might become a seething furnace without in the least endangering other contents of the building. A big vault for excelsior used in packing provides equal safety.

Each floor is supplied with flowing fountains for drinking purposes, as well as a complete toilet equipment. Other notable equipment of the building includes automatic sprinkler system throughout, the Lamson tube system for sending orders to all parts of the building, and two electrically operated elevators.

Mills, Rhines, Bellman & Nordhoff were the architects, and the contractors, A. Bentley & Sons Co., used 15,000 barrels of Medusa Gray Portland cement, manufactured by the Sandusky Portland Cement Co., Sandusky, Ohio, in its construction. Both are leading business firms of Toledo, and are deserving of great credit in connection with this work.

## To Standardize Concrete Work.

With a view to insuring standardized concrete construction in Seattle and throughout the state of Washington generally, three leading cement companies, the Washington Portland Cement Co., the

Superior Portland Cement Co. and the Olympic Portland Cement Co., have employed jointly the firm of Reitze, Storey & Duffy, Incorporated, of Seattle, as supervising engineers to inspect and report on the quality of workmanship and material furnished to cement users.

The movement inaugurated in the appointment of this engineering firm, it is expected, will result in uniformly good results and concrete construction will be brought to its highest development and effectiveness. All users of cement furnished by these companies will have the advantage of expert advice and supervision.

"Our object will be to make concrete construction the very best," said J. C. Storey of the supervising engineers this morning. "We shall prevent, if possible, a cheap grade of work being done at the expense of the taxpayers and also of the cement companies."

"Where the material of these cement companies is being used they want the best results that can be obtained under the best conditions. Quite often poor concrete construction is the result of ignorance of technical details and our firm will be ready at all times to give expert advice."

"Our work for the present will be confined principally to highways, retaining walls, docks and construction of like nature."

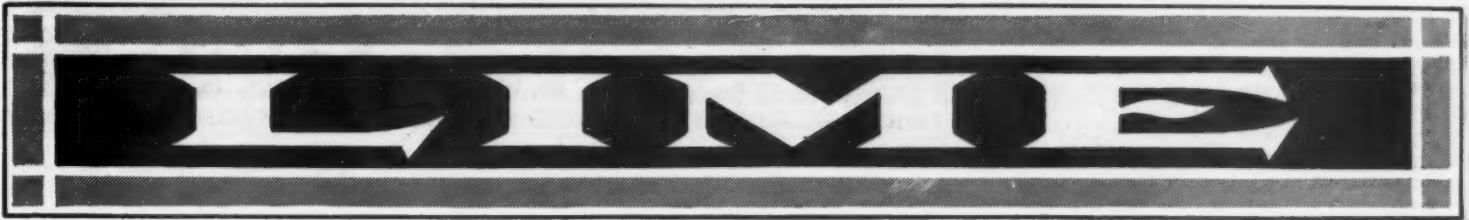
Cement Manufacturing Co., Indianapolis, Ind., has been incorporated; \$25,000; to manufacture and sell cement products; H. E. Goodwin, Indianapolis; L. T. Stebbing, W. D. Headrick.

The new plant of the San Diego Glazed Cement Pipe Co. at Twenty-eighth and N streets, San Diego, Cal., is now almost completed and will be ready for operation in a few days. This company was recently incorporated with a capital stock of \$75,000. Ernest V. White is vice-president and H. W. Sumption is secretary and treasurer of the concern. Mr. Sumption will also act as general manager.

The F. D. Cummer & Son Co., of Cleveland, Ohio, has just secured an order from the city of Atlanta, Ga., for a Cummer one-car portable asphalt paving plant with a guaranteed capacity of 2,000 yards of 2-inch top per day, or the equivalent of Topeka specifications or asphalt macadam. Atlanta has considerable asphaltic concrete to lay, and the above plant will no doubt be kept busy the greater part of the summer.

The Utica Hydraulic Cement Co., Utica, Ill., recently secured a verdict in the case which it brought against the Rock Island Railway Co. The cement company brought suit for \$4,500 as a result of a fire which destroyed sheds and barns belonging to the company and which the railroad was charged with having ignited by a spark from a passing engine. The jury returned a verdict fixing the cement concern's damages at \$1,250.





### Develop Uses of Lime.

**Henry M. Camp Believes Lime Manufacturers Should Individually and Collectively Inaugurate Systematic Publicity Campaign—Cites Progress Made by Cement Industry.**

Henry M. Camp, proprietor of the Lime Service Bureau, Washington, D. C., writes with regard to the aggressive and effective actions of members of the cement industry in increasing the sale of their product, pointing to the growth of that industry through a systematic publicity campaign in behalf of the new uses of cement.

"Plenty of opportunity exists for developing a greater output of lime products with the proper co-operation and support of the lime manufacturers," said Mr. Camp. "The cement people at their recent quarterly meeting held in Philadelphia voted a special and additional appropriation of \$70,000 to be promptly applied to special work on the concrete road problem, in addition to the regular appropriation for general promotion of new cement uses. This shows how live, wide awake and active the cement people are to take advantage of a new or growing use for their material. Hardly a barrel of cement was used in concrete roads four or five years ago. This year, according to road contracts under way in the United States, it is estimated that about 5,000,000 barrels of cement will be used. At the present rate of increase in road construction, there is scheduled ahead for concrete roads on the part of the various state highway departments sufficient to consume some 10,000,000 barrels of Portland cement.

"The preliminary investigations of Henry S. Spackman, made at the instigation and expense of a few hydrated lime manufacturers, shows the value and wisdom of using hydrated lime to the extent of about 10 per cent of cement content in these cement mixtures. A 10 per cent addition this year would have called for a consumption of about 100,000 tons of hydrated lime; next year, estimated at 200,000 tons; being used this year, but a few tons at the special instigation of one or two hydrate companies. There is certainly great need here in behalf of the lime manufacturers for concerted advertising and joint employment of sales engineers of the ability and qualifications to reach the road commissioners at all points."

"The agricultural field is also tremendous. The United States census of agriculture for the year 1910 shows the combined acreage of improved land in farms of all states east of the Mississippi river to be 206,041,999 acres. The agricultural experiment station people claim that over 80 per cent of this acreage needs regular liming. Regular liming should require an average of about one ton an acre every four years. This would, therefore, call for about 41,208,399 tons of lime per annum on an average east of the Mississippi river. This is, of course, the theoretical maximum limit. Production in the United States at this time is running only a little over 4,000,000 tons of lime products for all uses, of which probably not more than 1,350,000 goes on the farm. Further comment on the possibilities and probable results of a few years of active work by lime manufacturers should be unnecessary."

The Chain Belt Co., Milwaukee, Wis., has issued a 34-page catalog No. 54, pertaining to Chabelco

steel chain belt. Chabelco chain belt is an all-steel, case-hardened-bearing, roller chain belt, designed to meet the most difficult conditions. The side bars are punched from mild steel bar stock. The rollers of Chabelco for transmission purposes are made of the best grade of cold rolled steel shafting, machined out of the solid on automatic turret lathes. Chabelco steel chain belt has found a wide usage in cement mills, sand and gravel plants, glass plants, potteries, power houses, etc. The catalog is amply illustrated, containing much other information of importance.

### The Diesel Engine at the Panama-Pacific International Exposition.

California, with its abundance of oil and its dependence thereon for power, light and heat, seems at last to be fully awake to the magnificent possibilities of the Diesel engine. Thus, just at the psychological moment, comes the Panama-Pacific International Exposition, affording everyone an unparalleled opportunity to become well acquainted with this magnificent scientific achievement.

The very center of the Palace of Machinery will be occupied by a 500-brake horsepower Diesel engine built by the Busch-Sulzer Bros.-Diesel Engine Co., St. Louis, the pioneers of the Diesel engine in America. The engine will be direct connected to a direct current generator. It will be a working exhibit, valued at \$70,000, which will "tie in" with the regular electrical load of the Exposition and do its share, supplying that which has become so vital a factor in the life of these colossal exhibitions—electricity.

The exhibit will afford every opportunity to study the engine which epitomizes the accumulated experience of 15 years of Diesel building. The exhibit will be surrounded with charts illustrating the dominant features of fuel consumption very nearly in proportion to load—the engine's unique ability to maintain a fuel economy, which (anywhere between a load equal to half the capacity of the smallest unit up to the full capacity of the plant) assures a thermal efficiency equal to operation at full load at all times. The exhibit will be supplemented with photographs of Diesel installations in 26 states showing types, methods of operation, and diversity of application. Every endeavor to make it intelligible and worth while to engineer and layman alike will be made.

There are two distinct fields in which the Diesel engine excels; they are diametrically opposed: first, for auxiliary or stand-by service; second, for continual operation with a constant full load. As an auxiliary or emergency unit the engine cuts out all "stand-by losses," wasted fuel in keeping up steam and the extra attendance required for this purpose. A twist of the wrist starts the engine and full load may be pulled from the start. The engine feeds fuel to itself automatically and there is no labor incident to its operation.

For a heavy, steady drag its extraordinary saving of fuel and labor is most noticeable. The capital charges are smallest per unit of power developed, and the

engine may be depended upon for the longest, most severe non-stop runs of six weeks to two months. engine feeds fuel to itself automatically and there is no labor incident to its operation.

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### TRADE LITERATURE.

"The Kindling Squeegee and the Kindling Sand Spreader" is the title of a 42-page booklet just issued by the Kindling Machinery Co., Milwaukee, Wis., which contains a report of the operations of the street cleaning division of the engineer department, District of Columbia, Washington, D. C., as well as describing its line of street washing machinery and the Kindling sand spreader. The booklet is amply illustrated with views of the machinery as well as an extensive line of parts.

The American Road Builders' Association has published in an attractive volume the proceedings of the tenth annual convention of the association, held in Philadelphia December 9-12, 1913. The publication contains also the revised constitution of the association, the secretary's and treasurer's annual reports and the names of officers, together with a list of the members revised to date of issue.

The plant of the Marblehead Lime Co., at Springfield, Mo., was destroyed by fire on June 30, the loss being about \$100,000. The origin of the blaze is unknown. A brisk wind fanned the flames and prevented effective work by fire fighters.

**WHITEKOTE**  
HYDRATE  
**FINISH**  
THE  
MOORES  
LIME CO.  
SPRINGFIELD,  
OHIO

ITS ALL IN THE FINISH

WHITEKOTE THE RIGHT COAT

# CLAY PRODUCTS

## A Notable Brick Plant and Its Products

We present on this page pictures of the high-class, up-to-date plant and products of the Hocking Valley Fire Clay Co., Nelsonville, Ohio. The products of the works consist entirely of "Salt Glazed" building brick and "Encaustic" paving tile. The former are made in three shades, light, medium and dark, while the latter is in the dark shade only. Approximately 75 per cent of the business in glazed brick runs to the lightest shade. On special orders the company makes up a beautiful rock faced building brick, which is to be had in the dark shade only.

### Uses for Salt Glazed Brick.

There is a great widening market for this material and it is extensively used for both interior and exterior facing work of all classes of structures where sanitary conditions are desired. The more prominent classes of buildings are schools, churches, hospitals, prisons, power plants, garages, railway stations, fire stations, pumping stations, gymnasiums, libraries, factories, laundries and stables, and in late years there has been a decided tendency to use this class of brick in the exterior facing for fine business blocks and residences. In all of the above-named classes of work, this company has many fine reference buildings all over the country.

### Extension of Markets.

The markets for the Hocking Valley company's product seem to lie anywhere in the United States east of the Mississippi river, and in Canada east of Winnipeg, and their products are handled by about 100 representative brick selling agencies in the different cities of the territory above mentioned. In addition to this, the company is covering the state of Ohio and adjacent district by four traveling men in the field who sell their products exclusively.

### Capacity and Shipping Facilities.

The net daily capacity of this works is 40,000, or approximately 1,000,000 per month, and the

works are located at Nelsonville, Ohio, within about one mile of the large railway yards of the Hocking Valley Railway. A large supply of cars for shipping is always available and it is well known that the Hocking Valley Railway makes fine connection with all of the trunk line roads. A large stock of material is carried on hand for prompt shipment and splendid service is rendered.

### Machinery and Equipment.

The machinery and equipment throughout the entire works is absolutely modern. The power is partly steam and partly electric driven. There are in service eight 440-volt, three-phase, 60-cycle induction motors and the buildings are heated by steam and lighted by electricity. Only recently the Illinois Engineering Co., of Chicago, installed for this concern a vacuum pumping system on all



ENCAUSTIC PAVING TILE.

of the steam lines, which provides for the saving of all condensed water and a re-use of the same in the boiler plant. The process of manufacture is stiff mud. The clay from the mines is passed through a motor-driven crusher before going to the dry pan. Wet pans are used for tempering and the brick are made from a sewer pipe press with a goose neck attachment, thereby preventing lamination, and makes a much finer quality of brick than could be made with auger machine and pug mill, the company claims.

### Clay and Coal Supply.

The Hocking Valley Fire Clay Co. owns about 200 acres of clay and coal land in fee and has a large supply of both clay and coal for many years to come. This concern is now waging a campaign for new markets for their product and they have



### SALT GLAZED BRICK.

a special proposition to offer to all well-established dealers, and every dealer that desires a good, staple line such as the product of this company would do well to write them. The catalogue of the Hocking Valley company, recently published, is a brilliant and convincing argument on the advantages of its product, showing many pictured examples where Salt Glazed and Rock Faced brick were used in buildings of prominence. Other matter contained in the booklet further adds to the desirability of sending for this herald of the company's products.

The Virginia Clay Products Co., Norfolk, Va., was incorporated recently with a capital stock of \$25,000, for the manufacture of brick.

The Aurora Brick Works, Aurora, Ill., was recently incorporated with a capital stock of \$5,000 for the manufacture of brick. The incorporators are Harry J. Shmutte, F. E. Minish and W. V. Webber.

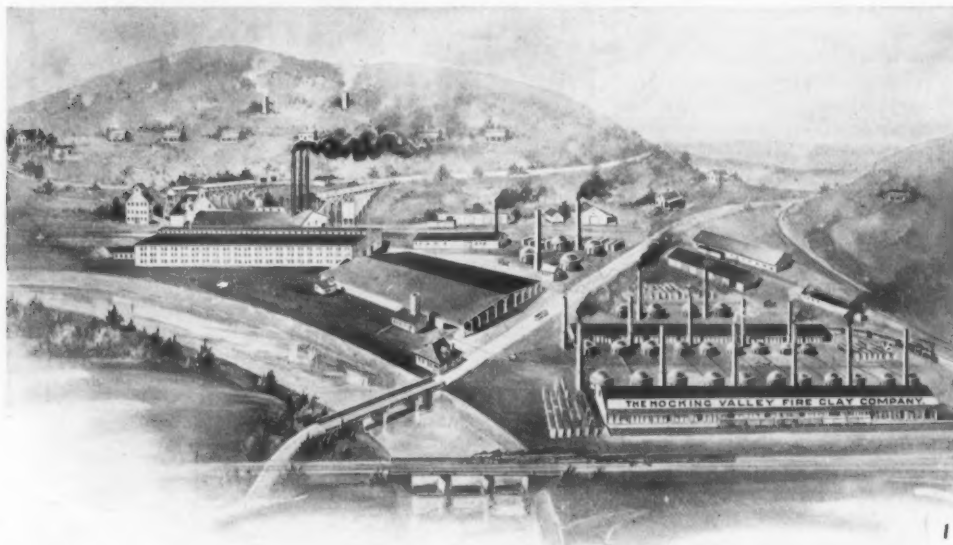
The Charles H. Hoff Brick Co., Terre Haute, Ind., was recently incorporated with a capital stock of \$5,000 for the manufacture of brick. The incorporators are Charles W. Hoff, Minna S. Hoff and Ewald Sommerlatte.

The Oklahoma Brick, Tile and Stone Co., Guthrie, Okla., was recently incorporated with a capital stock of \$25,000. The incorporators are J. A. Wilbanks and G. E. James, Norman, and H. B. Featherstone, Blanchard.

The old clay beds of the Carnegie Brick & Pottery Co. at Tesla, Cal., are to be worked again. The tunnel at the mine is being retimbered preparatory to the resumption of operations. Clay will be shipped to Stockton, Cal.

The Fuel Gas & Brick Co. has been incorporated with a capital stock of \$100,000 to purchase brick yards, lime kilns and gas plants. The incorporators are C. B. Bishop, C. J. Jacobs, and H. W. Davis, of Wilmington, Del.

The Southeast Missouri Clay Products Association met in session at Poplar Bluff, Mo., the middle part of June at the office of E. D. Shattuck, secretary of the Commercial Club of that city. The meeting was attended by a group of representative men of the line of business. The industry at Chaffee, Jackson, Illmo, Dexter, St. Francois county and Poplar Bluff is represented.



PLANT OF THE HOCKING VALLEY FIRE CLAY CO., NELSONVILLE, OHIO, HOME OF SALT GLAZED BRICK AND ENCAUSTIC PAVING TILE.



# GYPSUM PRODUCTS

## The Advantages of Plaster Board

Undeniably this is a practical age, when modern materials are speedily supplanting the old methods in building construction that have offered only protection from the elements, with no provision against the great loss of life and property by fire. For many years it was apparent, even before many of the present mediums of interior finish and decoration were established on the firm footing they now enjoy, that the old-fashioned wood lath was a dangerous, inadequate and expensive basis for the attachment of plaster.

Today buildings, and especially residences, are constructed from a different viewpoint from that in general usage 10 years ago. Where "frills" and "front" a decade ago seemed to mark the investment value of a dwelling, there now has been adopted in all quarters the idea of simplicity, eliminating as far as is practicable all that is unnecessary to the convenience and comfort of the tenant. In this transition the fireproof and fire-resisting features have not been overlooked, for prominent builders have noted a more and more increasing demand for residences and other types of buildings designed to withstand the fury of the flames.

Thus it has come about that plaster board has found an important place in the scheme of things—and its remarkable expansion in use would indicate that the mark of merit it has ascribed is but the beginning of the fuller knowledge to which astute home builders will arrive by the broad publication of its good qualities. For plaster board, composed of alternate layers of gypsum and felt made into strong, solid sheets of standard size, which can be nailed directly to the studding, furring or joists and plastered on its dry surface, appeals strongly to builders because of the simplicity of the operation and the nominal cost attached to it, to say nothing of the quality job which is always turned out.

This brings out the subject of cracks, those long, jagged and glaring cavities which are the bane of every new dwelling. No method, when the old-fashioned wood lath is used, has been determined by which this hideous stamp of ugliness can be eliminated on walls and ceiling that should otherwise be glabrous. That plaster board, which suffers none of the ills of buckling lath (usually green at any price), should offer relief from that quarter is in itself a quality which everyone should heed. For much repair expense, as well as annoyance and inconvenience to tenants in the average building, is caused by wood lath. They swell, warp and buckle from water used in plastering. This causes strains under the wall plaster and results in so-called "lath cracks" in the plaster. On drying out the lath contract—shrinking away from the plaster, which then has no firm foundation and is easily damaged. Wood lath are also the cause of the ugly streaks so often seen on ceilings. Moreover, wood lath

today are cut from the poorest kinds of lumber and are full of knots, sap, bark, wood-dye, cross-grains, etc. These defects weaken the wall, cause plaster cracks and stains; and frequent repairs and redecorating are necessary.

The demand for "safety first" is becoming loud—not merely in railway travel, in industrial occupations, in the construction of theatre and other public buildings, but also in the planning of residences and apartment buildings. The shameful waste of life and property by fire in the United States will not long be tolerated. And with the prime essentials of safety, it is certain that questions of health and comfort in the home will also



THE JEFFREY WAGON LOADER.

receive from the homebuilders the consideration due to their importance.

### The Jeffrey Wagon Loader.

The Jeffrey wagon loader consists of a truck-mounted bucket elevator, driven by either a gasoline engine or an electric motor. The driving connection to the elevator is made through a suitable friction clutch whose lever extends up into such a position that the attendant can reach it from the wagon.

A power propelling device for moving the machine in and out of pile is driven through a second friction clutch. The operating lever to this clutch terminates in a neat handle on each side of the machine which makes it convenient for the attendant to manipulate the machine from either side as found most convenient. The machine can be fed into the storage pile as desired while elevator is in motion. To pull the machine out of the pile the motion is reversed. An equalizing gear insures the driving strain to be applied equally to each wheel even when turning sharp corners or over rough roads.

In the Jeffrey Type A-2 loader, illustrated on this page, the frame is made rigid and supports the elevator ladder near its upper end. The lower end of the ladder is carried by a windlass and chains which permit the adjustment of the foot of the elevator. The top of the elevator is not adjustable.

This type is recommended for heavy work, such as gravel or crushed stone. A Type A-3 is also manufactured by the company.

The elevator ladder is adjustable through wide enough range to cause the buckets to scrape the ground or to bring them up sufficiently to allow the machine to be transported some distance without danger of coming into contact with the ground. This adjustment in the elevator may be had at any time, even while the elevator is in motion, without interfering with the adjustment of the drive chain; it is accomplished through a windlass and chains, as shown.

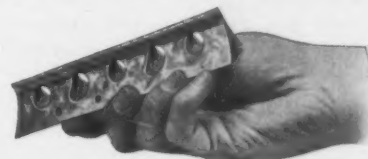
The machine is so mounted on the truck as to have three points of support, which prevents racking the frame even on very rough ground.

Provision is made for screening the material handled. A three-quarter-inch screen is always furnished unless some other size is specified. When the screen is not required it is stopped off by throwing the lower chute around until it lays inside of the screen, thus forming a veil. Both the screen chute and veil chute are adjustable to any angle desired.

The Jeffrey loader is furnished complete with electric motor or a suitable gasoline engine. When the loader is driven by electric motor, control of motor is had by means of switches and starting boxes placed outside of frame within easy reach of attendant. Starting appliances are protected by a sheet steel box. When gasoline engine is used, access is had through suitable hinged doors in the sides of the motor house.

The Jeffrey Mfg. Co., Columbus, Ohio, will send on 30 days' trial a portable wagon loader to any responsible dealer. If this machine does not do all that they claim, it may be returned without obligation to the dealer. In order to send the proper machine to meet the requirements of your yard the size, capacity and kind of material handled and the local conditions pertaining to the yard must be stated. The total shipping weight for either machine is approximately 5,800 pounds.

## Penco Metal Corner Bead



PENCO—the Metal Bead with the Straight Edge

Made from **HAMPTON IRON**  
(NOT STEEL)

Guaranteed against corrosion

If you are a Dealer

**ASK US**

**Penn Metal Co.**  
200 Devonshire St., BOSTON, MASS.

# With the QUARRIES

## To Promote Macadam Roads.

### Indiana Association at Monthly Meeting Decides to Inaugurate Educational Campaign.

The monthly meeting of the board of directors of the Indiana Crushed Stone Association was held June 11 in the office of the secretary, 823 Hume Mansur building, Indianapolis, with the following officers and members present: Herman H. Evans, Lafayette, president; E. B. Taylor, Greencastle, vice-president; R. N. Van Winkle, Indianapolis, treasurer; O. H. Binns, Logansport, and E. T. Milligan, Muncie, directors; A. B. Meyer, Indianapolis; C. W. McKee, Huntington; L. B. Hodgin, Kokomo, and V. G. Pogue, Indianapolis.

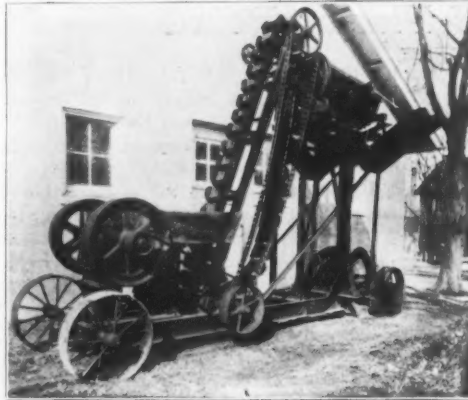
The leading feature of the discussion that took up the greater part of the session was what method would be most advisable to demonstrate to taxpayers that waterbound macadam roads are the cheapest and best to build from a standpoint of longevity and cost of maintenance. It was the unanimous opinion of the members present that to accomplish this the first thing to be done is to have standard specifications adopted, and put forth every effort to have said specifications carried out by the contractors.

Secretary F. W. Connell for the past month has been visiting different points throughout the state, inspecting the different macadam roads with the view of getting as many endorsements for this type of construction as possible. His trip was very successful in this particular, as he found waterbound macadam roads over the entire state, and where the different cities and counties had adopted standard specifications they were in excellent condition. A number of them are from three to 15 years old, with a very low maintenance. At the present time Mr. Connell is busy mailing pictures of some of these macadam roads to the public officials and taxpayers throughout the state, claiming that the picture "tells the story."

"The Muncie-Yorktown road is one of the best examples of what can be accomplished by public officials adopting standard specifications for waterbound macadam roads," said Mr. Connell. "This road has had four years of very hard usage, and without any maintenance. It has been used as a testing road by the Inter-State Automobile Co. for testing their cars, as well as being subjected to very heavy automobile traffic on account of being the main thoroughfare into the city of Muncie."

### INCREASING QUARRY EFFICIENCY.

Improvements being made to the properties of the Marble Cliff Quarries Co., Marble Cliff, Ohio, recently formed through the consolidation of the Woodruff & Pausch, Casparis and Marble Cliff properties, will make this one of the most efficient and complete quarry plants in this part of the country. It will have a capacity for turning out over 150 carloads of stone a day. At present the company is turning out about 85 carloads daily. Extensions have been completed to the big crushing mill to enable the concentration of operations for all the quarries. This mill is equipped to turn out crushed stone of all grades and sizes, down to the finest powder. The plant is operated 10 hours a day, with a comfortable load. In order to make the various properties consolidated contiguous for efficient operation, a tunnel 35 feet below the surface of the Casparis Road is being cut through solid



THE FORT WAYNE F-2 CRUSHER.

rock. This tunnel will be about 150 feet long when completed and of sufficient size to admit of the passage of locomotives and cars of stone. At present a little over 100 feet of the tunnel has been cut. When this is completed it will make possible the operation of the former Woodruff & Pausch quarry and the former Casparis quarry as a single contiguous property. Later the company has plans for cutting a similar tunnel under the railroads to connect the central plant with the old Marble Cliff quarry and unify this operation.

### The Fort Wayne F-2 Rock Crusher.

The most economical place to produce crushed stone is on the job. As a rule, concrete contractors, small townships, villages and owners of private estates have heretofore been obliged to import the crushed stone they have used, for the reason that their work has not been of a size to warrant the installation of a complete crushing plant. In many cases plenty of rock has been available, but could not be used on account of the expense of having it broken into proper sizes. To meet the requirements of the trade requiring a low-priced outfit to produce small quantities of crushed stone, The Good Roads Machinery Co., Kennett Square, Pa., has perfected a complete crushing plant known as the F-2. This rock crushing outfit is plainly shown in the accompanying illustration. It combines the

valuable features of low first cost, convenience in moving and in operation, completeness, durability and all-round serviceability. The entire outfit, being mounted on a steel truck, can be easily moved from place to place.

The weight of the F-2 crusher alone mounted on skids is 3,500 pounds. The weight of the entire outfit as shown in the illustration is about four tons. The crusher has a receiving opening 8x12" and will produce from four to six tons of material suitable for road work in an hour. This machine can be driven with an 8 H. P. engine.

The F-2 rock crusher is constructed almost entirely of steel and is consequently exceptionally strong while, at the same time, light in weight. On account of its steel construction, the upkeep is low.

During the past few years ground limestone as a fertilizing material has found an increasing use. The expense of producing this material, however, has made it practically impossible for farmers to avail themselves of the use of limestone found on their own lands. When fitted with special dies, the F-2 crusher will produce a considerable amount of crushed limestone to a fineness suitable for agricultural purposes. As the machine can be operated very economically, farmers throughout the country will find the F-2 crusher the solution of the fertilizing problem.

Upon application The Good Roads Machinery Co., Kennett Square, Pa., will be glad to furnish a bulletin illustrating and describing the F-2 crusher.

The North Branford Trap Rock Co., North Branford, Mass., has been incorporated with a capital stock of \$50,000 by William M. Joseph, Samuel Moss, Jr., and Alden J. Hill.

The Cleveland Stone Co. with offices in the Commonwealth building, Pittsburgh, Pa., is running its quarries in the Cleveland district full time and reports plenty of labor. Road work is the chief item in its contracts at present.

The Leona Quarry, at East Oakland, Cal., is being rehabilitated by C. S. Gilbert. He has bought a big outfit of second-hand machinery, including a No. 8 McCully crusher, from the Great Western Power Co., and two No. 5 crushers and one No. 4 crusher from other parties. The No. 8 crusher, though second hand, has never been used and is in first-class condition. A railroad track connecting the quarry with the California Railroad is almost completed.

The Bassler Quarries, at Myers-town, Pa., operated by the General Crushed Stone Co., of Reading, Pa., have decided to abandon these quarries owing to immersion. The plant will be dismantled and machinery shipped to other points. Two large holes 50 feet in depth are filled with water and officials fear that the cost of pumping this water out would be greater than the benefits to be derived from working the quarries.

The Pacific Coast Borax Co. is putting in McCully rolls and crushers of 250 tons hourly capacity for crushing borax at its Death Valley (Cal.) deposits.



WATER-BOUND MACADAM ROAD—MUNCIE-YORKTOWN ROAD, DELAWARE COUNTY, INDIANA.



# SAND and GRAVEL

## A Remarkable Sand Boat

**The Steamer "Hydro," Owned and Operated by the Hydraulic Sand & Transit Co., Possesses Facilities for Production and Delivery Which Make for Economy in Its Strictest Application.**

The handling of sand and gravel—their production and delivery, always forms a subject replete with interest to the operators. Each bank or dredging operation is, by reason of geological and other conditions, a distinct and separate proposition from the others and presents a problem to be solved from the standpoint of economical production as it relates to market conditions.

A noteworthy example of the modern application of methods and machinery to low-cost production and speed in transmission from source to market is expressed by the steamer "Hydro," owned and operated by the Hydraulic Sand and Transit Co., 1648 Otis building, Chicago, with yards in various sections of the city. The concern secures its material from Lake Michigan. Two grades of sand are handled by the Hydraulic company in the Chicago market—fine sand for use in plaster and brick mortar, and coarse sand for concrete purposes.

The Hydro has a capacity of 925 yards, which can be sucked up by two 12-inch centrifugal suction pumps into the storage bins in about one hour and a half, and can be unloaded in three and one-half hours, or at the rate of 250 yards per hour. She has a speed of 12 miles per hour and can make a trip of 100 miles and deliver a load in a day. An equipment of special machinery is provided for taking the surplus water and moisture from the sand, a feature not usually found in sand suckers, for in general practice about 30 per cent of moisture is contained in sand obtained from water depths. The Hydraulic Sand and Transit Co. claims that not more than 5 per cent of water is retained in its material when derived from the lake, which can be entirely removed in slightly more than one hour.

The machinery for handling the sand from the hoppers to the wheeling device consists of 42-inch conveyors, with heavy roll belt, and two clam shell buckets attached to 20-ton McMyler cranes. The conveyors deposit the sand 75 feet back from the docks. It is possible, also, to unload the boat with the clam shell buckets. The Hydro differs from the general type of sand sucker in that it has only two large pockets instead of the usual four or six. It is also said to be the only steamer of its kind especially fitted with apparatus for pumping out the cargo.

The Hydro is equipped with two very large settling tanks, so that it is possible to pump the sand from the pockets into these tanks and deliver to the conveyors, and in that way deliver sand on the dock. She is electrically equipped for furnishing her own light, including a powerful searchlight, which enables the boat to operate day and night. Capt. Walter Campbell, who has the reputation of being one of the most experienced men in this line of work, is in command of the boat. The Hydro was designed and built complete by the Manitowoc Ship Building & Dry Dock Co., which owns all patents on conveying apparatus, etc. The boat has been in operation slightly over nine months.

The storage yard of the Hydraulic Sand and Transit Co. is at 2039 Lumber street and is in like character to its production facilities, so far as ef-

iciency is concerned. It is one of the finest-equipped yards in Chicago, being floored with heavy planking throughout the entire property. It is possible to store 35,000 cubic yards of material at the Lumber street location alone. The North Side yard, at N. Halsted and Haines streets, has a capacity of 7,500 yards, while yard No. 3, at 27th



YARD No. 1 OF HYDRAULIC SAND & TRANSIT CO.: STORAGE CAPACITY, 35,000 CUBIC YARDS.

and Robey streets, is for loading cars. This yard is located on the C. R. & T. Railroad, which has connection with all the principal roads serving the Chicago switching district.

## Dull Equipment in South Dakota.

The Kameska Materials Co., Watertown, S. D., have been operating their new sand and gravel washing plant the last few months. The plant is of the cableway excavator type, consisting of a one-and-a-half-yard rear dumping excavator oper-

ated by a 40 horsepower two-drum hoisting engine. The picture on this page shows the general arrangement of the plant.

The bucket delivers the material into a hopper at the top of the plant and the oversize is taken out by a bar grizzly over the hopper. The material then goes into three Dull type, inclined conical washing screens, making three sizes of gravel. The sand goes into a 60-inch steel tilting type sand separator, which separates the sand from the muddy water. A saddle back screen is also used for making fine building and brick-laying sand. Mixing gates are provided for mixing various grades of sand in different proportions. The plant is giving excellent results.

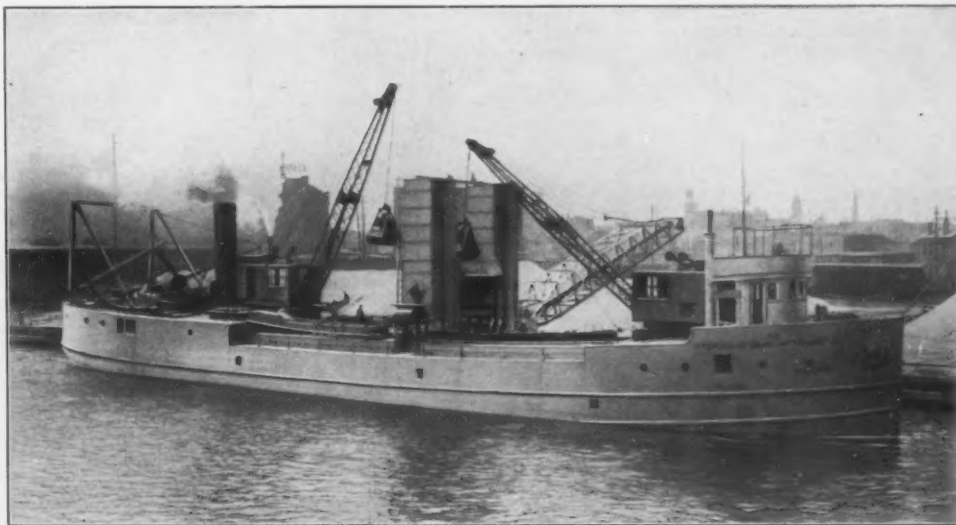
The entire equipment was furnished by The Raymond W. Dull Co., 1910-1912 Conway building, Chicago. The Kameska Materials Co. extend an invitation to any one wishing to visit their plant.

## SUSTAIN WILLIAMS PATENT.

The Williams Patent Crusher & Pulverizer Co., St. Louis, Mo., in a recent communication advised that "Judge Hazel of the United States District Court at Buffalo, N. Y., on June 3, 1914, entered a final decree and granted a perpetual injunction against the Kinsey Mfg. Co. restraining them from further infringing the Williams Patent No. 939975, owned by the Williams Patent Crusher & Pulverizer Co., of St. Louis, Mo."

The Greenville Gravel Co., of Paducah, Ky., has changed its name to the Greenville Stone & Gravel Co., and has increased its capital from \$75,000 to \$150,000.

The Trinity Sand, Stone & Gravel Company, which was recently organized at Trinity with a capital stock of \$25,000, will install machinery for operating its sand and gravel beds. J. P. McKinnis is interested in the enterprise.



THE STEAMER "HYDRO," OWNED BY THE HYDRAULIC SAND & TRANSIT CO.

# SAND-LIME BRICK

## Successful Sand-Lime Brick Pioneers

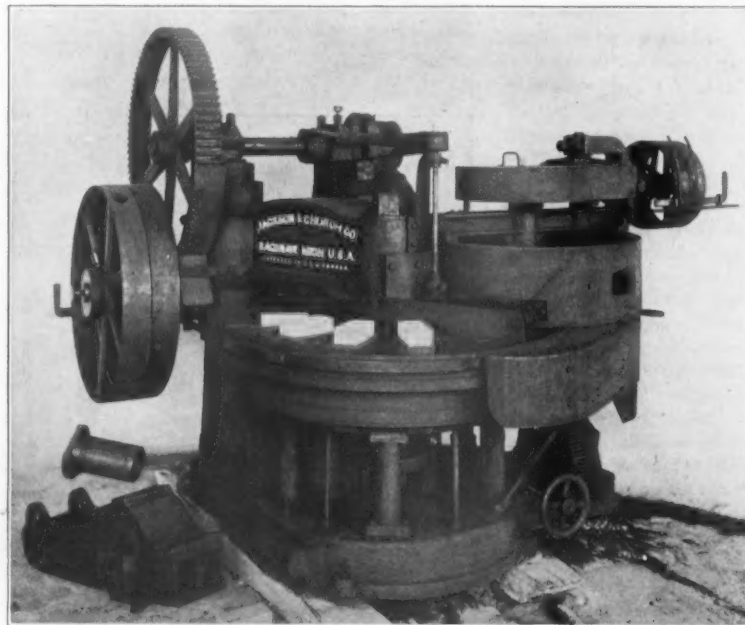
### Some Interesting Data Pertaining to an Important Factor in the Evolution of the Sand-Lime Brick.

Away back in the early 1900's John L. Jackson and Edgar D. Church, of the iron working firm of Jackson & Church Co., Saginaw, Mich., became interested in the progress of the sand-lime brick as exemplified at that time by the product which the German manufacturers were turning out. There appeared to be a place in the general scheme of things for a really first-class product made of a combination of sand and lime, inasmuch as there seemed to be much to be gained in the quality of other kinds of brick in that period.

After a trip to Germany, where Mr. Jackson was greatly impressed with the German process of manufacture and the comparative simplicity with which good sand-lime brick could be made, the American patent rights on processes and machinery were secured. The following year Mr. Jackson and associates established what proved to be the first successful sand-lime brick factory in America. This factory has continued actively in operation, though in the early days many problems were faced with regard to the perfecting of better machinery and the vigorous competition of improving quality of clay and shale brick made in that vicinity. Many changes were made in the presses until in 1904 the Jackson & Church Co. perfected an improved design of rotary table press which started immediately on a regular run of high-quality product. This press is still in active service and apparently good for another 10 years of steady use.

About this time the American Sandstone Brick Machinery Co., a subsidiary concern, was organized to build and equip sand-lime brick plants. This subsidiary company was later absorbed by the parent concern, the Jackson & Church Co., which now handles the business in its own name. The company has since established sand-lime brick companies over a widely separated section of the country, which have been singularly successful because of the company's policy of carefully inspecting the raw materials and thus assuring a perfect product before installing machinery. In fact, the Jackson & Church Co.'s ruling on this point has always

been inflexible, so that no plant which faced the quick depression which was a reaction from the overcrowding of the industry in the beginning could be said to have purchased its equipment from the Jackson & Church Co. This safeguarding of the interests of its customers has gained for the com-



THE JACKSON & CHURCH SAND-LIME BRICK PRESS.

pany a lifelong and solid patronage, and the prospective buyer of machinery today can be certain that technical information of the utmost reliability can be obtained upon application to the Jackson & Church Co.

Sand-lime brick have been made since remote antiquity, but their economical manufacture remained to be worked out in comparatively recent years. In making sand-lime brick, sand and hy-

drated lime are mixed in the proportion of 95 to 5, moulded under enormous pressure and subjected to a steam bath at 125 pounds' pressure for a period of 10 hours, when they are ready for use.

The mixing and pressing effect a mechanical union of the sand and lime, while the steam makes a chemical change in the mass, producing hydro-calcium-silicate, or sandstone, a brick suitable for every purpose.

The sand should be as nearly pure silica and the lime as nearly pure calcium as possible, but materials departing widely from these standards are often used successfully. Plants equipped by the Jackson & Church Co. are using sea sand, lake and river sand and bank sand of varying degrees of impurity and size, as well as sand from crushed rock. A one-pint sample will enable it to determine whether the sand is suitable, while if two cubic feet or more be sent the company will make it up into sample brick, thus affording a practical test.

The building required is not elaborate, the machinery and process are simple and the labor low priced. Work can be carried on the year around and by night as well as by day.

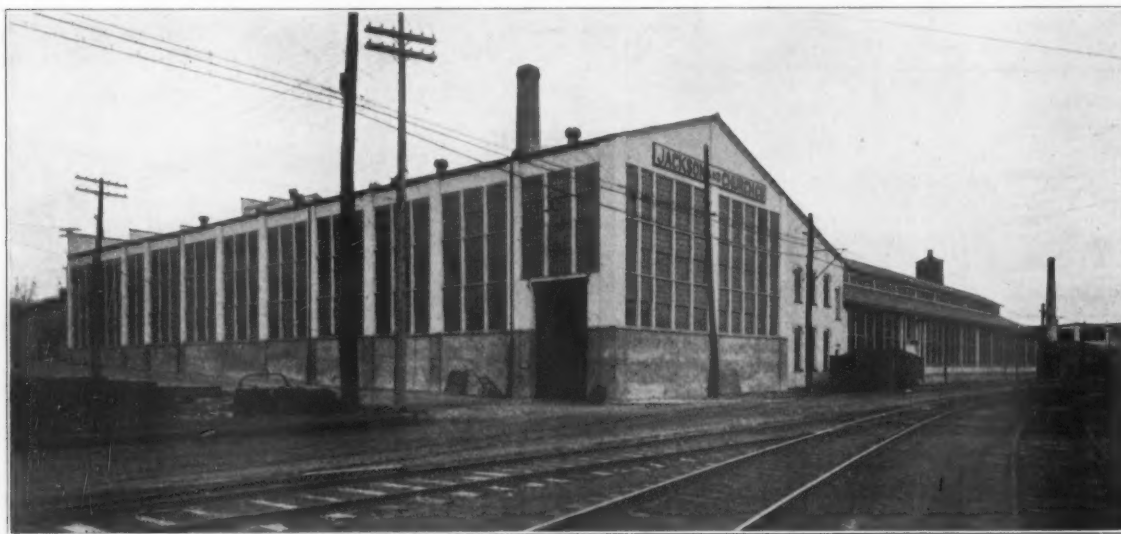
The Jackson & Church Co. owns a manufacturing plant covering one large city lot and parts of three others; it consists of modern and well-equipped foundry, machine shop, boiler shop and structural iron plant with the attendant pattern and blacksmith shops, storage warehouse, etc. The entire plant has been rebuilt within the past few years

and has no superior for economical production of high-grade machinery and boilers.

While the product of the factory includes duplex engines for dredging and hoisting service, special machinery, tanks and structural steel work, its special attention is given to machinery for the brick industry, including high grade tubular boilers, internally fired boilers of the Scotch Marine type, heavy duty engines especially adapted to brick

plants of all sorts, and its line of sand-lime brick machinery consisting of lime hydrating outfits, mixing and grinding machinery for both lime and sand, wet and dry grinding pans, rotary table brick presses, hardening cylinders, brick cars, turntables, etc. When Jackson & Church Co. equips a brick plant the entire outfit of machinery is of their own manufacture.

While the concern and manufacturing plant are large enough and sufficiently well equipped for economical production, the organization is small, so that the conduct of the business is under the personal supervision and direction of one of the four principal stockholders, John L. Jackson, president; A. G. Roeser, vice-president; W. L. Miles, vice-president and salesmanager, and E. D. Church, secretary and treasurer.



THE JACKSON & CHURCH COMPANY'S PLANT AT SAGINAW, MICH.



## The Production of Silica.

Silica, the oxide of silicon ( $\text{SiO}_2$ ), is the most abundant of mineral substances. Its occurrences of commercial importance are in a great many different forms, such as vein quartz, as a constituent of pegmatites, as sand, sandstone, quartzite, or flint, as tripoli, and as diatomaceous (infusorial) earth. In some forms, such as rose, smoky, and amethystine quartz, it has a gem value. This article deals with silica used for making glass, and also of all silica used in the form of sand, gravel, and crushed material for building, for concrete and mortar, for foundry and furnace work, and for cutting and grinding stone. Silica for such purposes is either gem material or sand, and it is commercially so designated.

The marketed production of silica in 1913 as reported to the United States Geological Survey was 232,192 short tons, valued at \$953,832. It is not certain that the inquiries upon which this report is based reached all producers, nor that the returns were complete. But it is believed that the measure of incompleteness is well under 10 per cent of the actual total production. Although the total production is given without any great assurance of accuracy, it is offered as the best approximation that can at present be made.

The marketed production of silica from vein and pegmatite quartz and from pegmatite in 1913 was 97,902 short tons, valued at \$201,488 against 97,874 short tons, valued at \$191,685 in 1912. This was an almost inappreciable increase in quantity and an increase of \$9,803, or about 5 per cent, in value. The decrease in the quantity sold crude was 7,876 short tons, or about 11 per cent, with a decrease in value of \$12,814, or about 24 per cent, whereas the quartz sold ground increased 8,057 short tons, or about 34 per cent, in quantity and \$22,617, or about 15 per cent, in value. The average price per ton for crude in 1911 was 91 cents; in 1912 it was 82 cents, and in 1913 it was 73 cents. The average price per ton for ground quartz in 1911 was \$8.32, in 1912 it was \$7.94, and in 1913 it was \$6.23. In 1913, of the total marketed output, 75.76 per cent was crude and 24.24 per cent

was ground, and of the total value received, 27.02 per cent was for crude and 72.98 per cent was for ground.

| Years.    | Crude.    |           | Ground.   |           | Total.    |           |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|           | Quantity. | Value.    | Quantity. | Value.    | Quantity. | Value.    |
| 1910..... | 121,450   | \$122,234 | 14,010    | \$115,122 | 135,460   | \$237,356 |
| 1911..... | 95,898    | \$85,896  | 15,591    | \$122,773 | 111,489   | \$208,669 |
| 1912..... | 77,739    | \$70,430  | 10,194    | \$84,662  | 87,933    | \$155,092 |
| 1913..... | 82,255    | \$67,256  | 15,639    | \$124,529 | 97,894    | \$191,785 |
|           | 74,176    | \$64,642  | 22,726    | \$187,066 | 97,902    | \$201,488 |

## CERESIT IN VERSE.

The Ceresit Waterproofing Co., of Chicago, has issued a little folder containing pictures of various types of buildings in which Ceresit waterproofing



was used, each accompanied by a clever verse of poetry. Insufficient space prevents our reproducing the four verses contained in the folder, but the following will serve to depict in a general way its character. It applies to a unique water tower which was constructed at Bellevue, Del., by the Graham-Campion Co., of Philadelphia. This stone building contains a reinforced concrete tank of 10,000 gallons' capacity, the outlet of which is 30 feet above the ground. Ceresit waterproofing compound was

used in the mixture of concrete and after 18 months' service the water tower has been found to be perfectly water tight:

The purpose of a water tower  
Is easy to explain,  
It's meant to hold the water in  
And not act as a drain;  
Some towers perform their function  
While others leak a bit,  
But if you're wise, as I surmise,  
In yours use Ceresit.

## UNIVERSAL WILL CONDUCT RESEARCH BUREAU.

The Universal Portland Cement Co. has recently established a research bureau, the purpose of which is the analyzing and solving of perplexing problems that confront the cement industry. Clifford W. Lyon has been appointed research engineer and will devote his entire time to the investigation and solution of various operating problems that now confront the cement industry. Mr. Lyon has been connected with the cement industry since 1902, when he was superintendent of the Northampton Portland Cement Co. at Stockertown, Pa. It was at this time that he entered the research field, making a study of kiln practice and of conserving and utilizing waste gases from rotary kilns, dryers, etc.

Since that time Mr. Lyon has been continuously connected with the cement industry, either in construction or reconstruction of cement plants, building machinery for cement plants, or as operating superintendent of active plants in the Lehigh Valley and Kansas fields. In the course of his work he has visited the greater part of the cement plants in this country.

A demonstration of machinery suitable for preparing limestone for agricultural purposes was given at the Kentucky Agricultural Equipment Station farm, June 22-26. A number of crushers, pulverizers and spreaders demonstrated the complete operation of crushing, pulverizing and spreading limestone. The mixing and use of cement on the farm was also shown.

## ROCK PRODUCTS AND BUILDING MATERIALS

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Curry Mfg. Co., J. P. (bag tyers).  
Faerberhill Mfg. Co. (bag tyers).  
Jaite Company, The.  
Urachel Bates Valve Bag Co.  
West Jersey Bag Co., The.

## BELTING.

H. W. Caldwell & Co.  
Chicago Belting Co.  
Dull & Co., R. W.  
B. F. Goodrich & Co.  
Imperial Belting Co.  
Stephens-Adamson Mfg. Co.  
Webster Mfg. Company.  
Weller Mfg. Co.

## BRICK.

Belden Brick Co.  
Hooking Valley Clay Co.  
Metropolitan Paving Brick Co.

## BRICK CLAMPS.

The P. D. Crane Co.

## BRICK PAVING.

Alton Brick Co.  
Harris Brick Co.  
Metropolitan Paving Brick Co.  
National Paving Brick Mfrs. Assoc.  
Thornton Fire Brick Co.

## BUCKETS, DUMPING AND GRAB.

Atlas Car & Mfg. Co.  
H. W. Caldwell & Co.  
Hendrick Mfg. Co.  
McMyler-Interstate Co.  
Owen Bucket Co.  
Willis Shaw Mch. Co.

## CABLES.

American Steel & Wire Co.  
Dull & Co., R. W.  
Sauerman Bros.

## CASTINGS.

Edgar Allen Amer. Mang. Steel Co.  
Taylor-Wharton Iron & Steel Co.

## CEMENT, HYDRAULIC.

Carolina Portland Cement Co.

## CEMENT, PORTLAND.

Atlas Portland Cement Co.  
Canada Cement Co.  
Carolina Portland Cement Co.  
Chicago Portland Cement Co.  
Onlay Cement Mfg. Co.  
Dexter Portland Cement Co.  
French, Samuel H., & Co.  
Giant Port. Cement Co.  
Kansas City Portland Cement Co.  
Lahigh Portland Cement Co.  
Marquette Cement Mfg. Co.  
Northwestern States Portland Cement Co.  
Ohio & Western Lime Co.  
Peerless Port. Cement Co.  
Phoenix Portland Cement Co.  
Sandusky Portland Cement Co.  
St. Louis Portland Cement Works.  
Security Cement & Lime Co.  
Union Sand & Material Co.  
Universal Portland Cement Co.  
Vulcanite Portland Cement Co.  
Whitehall Portland Cement Mfg. Co.  
Wolverine Portland Cement Co.  
Woodville Lime & Cement Co., The.

## CHAINS.

Edgar Allen Amer. Mang. Steel Co.  
Columbus Chain Co., The.  
Jeffrey Mfg. Co.  
Taylor-Wharton Iron & Steel Co.

## CLAY AND FIRE CLAY.

Crossley, Geo. C.

## CLAYWORKING MCHY.

American Clay Mch. Co.  
Bartlett, C. O., & Snow Co.

## COAL CHUTES.

Kewanee Mfg. Co.

## COLORINGS, DRY AND MORTAR.

Samuel Cabot.  
Chattanooga Paint Co.  
Clinton Metallic Paint Co.  
Macneal, James B., & Co.  
Ricketson Mineral Paint Works.  
Williams, C. K., & Co.

## COMPRESSORS.

Clayton Air Compressor Co.

## CEMENT FLOOR HARDENERS.

Premier Flooring & Material Co.

## CONCRETE MIXERS.

Jaeger Mach. Co.  
Miscampbell, H.  
Power & Mining Mach. Co.

## CONCRETE REINFORCEMENT.

American Steel & Wire Co.

## CONVEYORS AND ELEVATORS.

Allis-Chalmers Manufacturing Co.  
Austin Mfg. Co.  
Bartlett, C. O., & Snow Co.  
Caldwell, H. W., & Sons Co.  
Dull, Raymond W., & Co.  
Ehrsam, J. B., & Sons Mfg. Co.  
Goodrich Co., The B. F.  
Jeffrey Manufacturing Co.  
Link Belt Co.  
McMyler-Interstate Co.  
McLanahan Stone Machine Co.  
Power & Mining Mach. Co.  
Stephens-Adamson Mfg. Co.  
Webster Mfg. Company.  
Weller Mfg. Co.

## CONSULTING GEOLOGISTS.

Grimsley, G. P., Ph. D.  
Robt. W. Hunt & Co.  
Lewis & Co., W. J.

## CORNER BEADS.

Bostwick Steel Lath Co., The.  
Penn Metal Co.

## CRANES—LOCOMOTIVE AND GANTRY.

McMyler-Interstate Co.

## CRUSHERS AND PULVERIZERS.

Allis-Chalmers Manufacturing Co.  
American Pulverizer Co.  
Austin Mfg. Co.  
Bacon, Earl C.  
Bartlett, C. O., & Snow Co.  
Bonnot Co., The.  
Bradley Pulverizer Co.  
Butterworth & Lowe.  
Ehrsam, J. B., & Sons Mfg. Co.  
Gruendler Patent Crusher & Pulverizer Co.  
Jeffrey Manufacturing Co.  
Kent Mill Co.  
Lewistown Foundry & Machine Co.  
Martin, Henry.  
McLanahan Stone Machine Co.  
Pennsylvania Crusher Co.  
Power & Mining Mach. Co.  
Raymond Impact Pulverizer Co.  
Symons Brothers.  
Sturtevant Mill Co.  
Taylor-Wharton Iron & Steel Co.  
Williams Pat. Crusher & Pulverizer Co.

## DRAIN TILE.

American Brick & Tile Co.  
American Clay Co.  
Evans Clay Mfg. Co.  
Mason City Brick & Tile Co.

## DRILLS.

Armstrong Mfg. Co.  
Cyclone Quarry Drill Co.  
Howells Mining Drill Co.  
Loomis Machine Co.

## DRYERS.

American Process Co.  
Bartlett, C. O., & Snow Co.  
Ruggles-Coles Eng. Co.  
Worrell, S. E.

## DUMP CARS.

Atlas Car & Mfg. Co.  
Austin Mfg. Co.  
Stephens-Adamson Mfg. Co.  
Weller Mfg. Co.

## ENGINEERS.

Bacon, Earl C.  
A. P. Broomell.  
Duff Patents Co., Inc.  
Dull, Raymond W., & Co.  
Fuller Engineering Co.  
Grimsley, G. P.  
Robt. W. Hunt & Co.  
Improved Equipment Co.  
Kirkpatrick, W.  
Lewis, W. J., & Co.  
Meade, R. K.  
Nat'l Engineering Co.  
Sauerman Bros.  
Schaffer Eng. & Equip. Co.  
Smidth & Co., F. L.  
Stephens-Adamson Mfg. Co.

## ENGINES.

Armstrong Mfg. Co.  
Busch-Sulzer Bros.-Diesel Engine Co.  
Good Roads Mach. Co., The.  
Jackson & Church Co.  
Power & Mining Mach. Co.

## EXCAVATORS.

Raymond W. Dull Co.  
Indianapolis Cable Excavator Co.  
Jackson & Church Co.  
McMyler-Interstate Co.  
Owen Bucket Co.  
Sauerman Bros.  
Weller Mfg. Co.

## FIRE BRICK.

Carolina Portland Cement Co.  
Evans Clay Mfg. Co.  
Improved Equipment Co.  
Mason City Brick & Tile Co.  
Thornton Fire Brick Co.  
Thompson-Armstrong Co.  
Union Mining Co.

## FLUE LININGS.

Evans Clay Mfg. Co.  
Thompson-Armstrong Co.

## FURNACES FOR SPECIAL PURPOSES.

Improved Equipment Co.

## GEARS.

Edgar Allen Amer. Mang. Steel Co.  
Calowen, H. W., & Son Co.  
Stephens-Adamson Mfg. Co.  
Taylor-Wharton Iron & Steel Co.  
Weller Mfg. Co.

## GLASS SAND MACHINERY.

Lewiston Fdy. & Mach. Co.

## GYPSUM—PLASTER.

American Cement Plaster Co.  
American Keene Cement Co.  
Best Bros. Keene's Cement Co.  
Cardiff Gypsum Co.  
Carolina Portland Cement Co.  
Giant Plaster Board Co.  
Kelly Plaster Co.  
National Mortar & Supply Co.  
Niagara Gypsum Co.  
Ohio & Western Lime Co.  
Plymouth Gypsum Co.  
Reeb, M. A.  
U. S. Gypsum Co.  
Wheeling Wall Plaster Co.

## HAIR.

Ohio & Western Lime Co.

## HOLLOW CLAY TILE.

American Clay Co.  
Mason City Brick & Tile Co.  
Metropolitan Paving Brick Co.  
Whitacre Fireproofing Co.

## HYDRATING MCHY.

Kritzer, Co., The.  
H. Miscampbell.

## LIME.

Carolina P. C. Co.  
Farnam-Cheshire Lime Co.  
Hannibal Lime Co.  
Kelley Island Lime & Trans. Co.  
Mitchell Lime Co.  
The Moores Lime Co.  
National Lime & Stone Co.  
National Mortar & Supply Co.  
Niagara Gypsum Co.  
Ohio & Western Lime Co., The.  
Owens & Son, John D.  
Scioto Lime & Stone Co.  
Security Cement & Lime Co.  
Woodville Lime & Cement Co.

## LIME, HYDRATED.

Hannibal Lime Co.  
Kelley Island Lime & Transport Co.  
Mitchell Lime Co.  
The Moores Lime Co.  
National Lime & Stone Co.  
National Mortar & Supply Co.  
Niagara Gypsum Co.  
Ohio & Western Lime Co., The.  
Owens & Son, John D.  
Scioto Lime & Stone Co.  
Security Cement & Lime Co.  
Woodville Lime & Cement Co., The.

## LIME KILNS.

A. P. Broomell.  
Improved Equipment Co.

## LOADERS.

Jeffrey Mfg. Co.  
Link Belt Co.  
Stephens-Adamson Mfg. Co.  
Weller Mfg. Co.

## LOCOMOTIVES.

Davenport Locomotive Wks.  
Willis Shaw Mch. Co.

## MANGANESE STEEL.

Edgar Allen American Manganese Steel Co.  
Taylor-Wharton Iron & Steel Co.

## METAL LATH.

Bostwick Steel Lath Co.  
Carolina Portland Cement Co.  
North Western Expanded Metal Co.  
Sykes Metal Lath & Roofing Co.

## MOTOR TRUCKS.

Kissel Kar Co.

## PAINT AND COATINGS.

Samuel Cabot.  
Chattanooga Paint Co.  
James B. Macneal & Co.  
Ricketson Mineral Paint Co.  
C. K. Williams & Co.

## PEBBLES.

Canada Pebble Co.

## PERFORATED METALS.

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Johnson & Chapman.  
Hendrick Mfg. Co.

## PREPARED ROOFING—SHINGLES.

Carolina Portland Cement Co.  
Flintkote Mfg. Co.  
The Heppes Co.  
Reynolds Asphalt Shingle Co.

## PLASTER.

See Gypsum.

## PLASTER BOARD.

Giant Plaster Board Co.  
National Plaster Board Co.  
Niagara Gypsum Co.  
Plymouth Gypsum Co.  
U. S. Gypsum Co.

## PLASTER MCHY.

Butterworth & Lowe.  
Dunning, W. D.  
Ehrsam, J. B., & Sons Mfg. Co.  
Miscampbell, H.  
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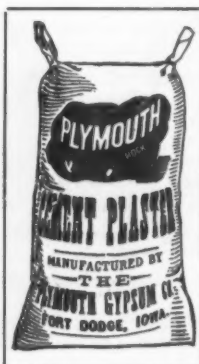
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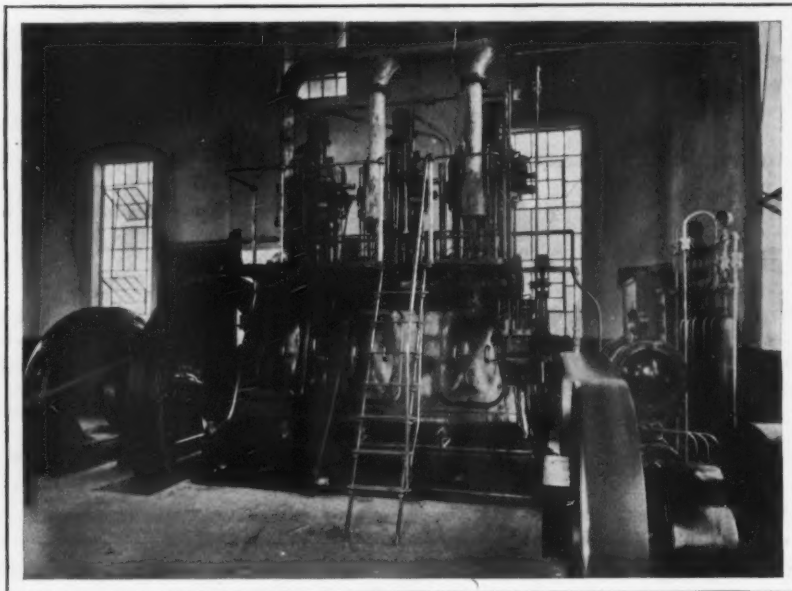
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